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T O F A Y E

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RELATION OF ALIENATION AND INTROVERSION TO
ACADEMIC ACHIEVEMENT AMONG
GRADE TEN STUDENTS

by

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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Relation of Alienation and Introversion to Academic Achievement among Grade Ten Students", submitted by Philip J. Patsula in partial fulfilment of the requirements for the degree of Master of Education.

SHORTER ABSTRACT

For 371 Grade Ten Edmonton students of average scholastic aptitude data were collected on alienation, introversion, scholastic aptitude, school achievement, socio-economic status, and sex variables. Factor analyses of items from selected alienation scales resulted in more unitary scales to measure aspects of alienation.

In a multiple linear regression design introversion was found to be significantly related to school achievement, whereas alienation was not found to be related to school achievement. Significant sex differences were found in respect to some of the alienation measures. Implications for theory, practice, and research were discussed.

LONGER ABSTRACT

A multiple linear regression design, with statistical control for socio-economic status and sex was employed to test two major hypotheses among 371 Edmonton Grade Ten students of average scholastic aptitude: (1) the relation of alienation to academic achievement and (2) the relation of introversion to academic achievement. Minor resulting hypotheses were concerned with establishing relationships among the variables of alienation, introversion, socio-economic status, and sex.

The alienation measures used were Dean's Alienation Scale, Srole's Anomia Scale, McClosky-Schaar's Anomy Scale, and Thorne's Humanistic Identification Scale, plus four additional scales obtained through factor analyses and orthogonal rotations of the items of the first three alienation scales listed above; the introversion measure was obtained through the Extraversion-Introversion subscale of the 1968 Eysenck Personality Inventory; academic achievement measures were obtained from provincially-standardized examination results.

The major hypothesis of significant positive relation between introversion and aggregate academic achievement was confirmed, whereas the major hypothesis of significant linear negative relation between alienation measures and aggregate academic achievement was not confirmed. Evident, however, was a trend towards a negative relation between the powerlessness aspect of alienation and achievement but a positive relation between the social isolation aspect of alienation and achieve-

ment. The findings among the minor hypotheses were as follows: some significant intercorrelations between introversion and alienation measures (indicating the social aspect of Eysenck's introversion); significant sex differences in respect to alienation measures but not in respect to introversion; and a trend toward negative linear relation between socio-economic status and alienation. The .05 level of significance was used in the testing of all of the hypotheses.

It was noted that school achievement was related not only to the students' general expectation of internal control but also to many situational variables, and it was suggested that further research might investigate the role of alienation to more novel learning situations than that of year-end school achievement.

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CHAPTER I: GENERAL PROBLEM

INTRODUCTION

Do personality or motivational variables influence academic achievement at the high school level? Much more has been written about personality variables involved in types of achievement of college students than of the corresponding variables among secondary school students. Generally, the present study is designed to ascertain whether the research findings in respect to the personality variables of introversion and alienation in relation to academic achievement among college students and others are applicable also to high school students.

Throughout the writer's contact with teachers at the primary and secondary school levels, the academic achievement of pupils had been generally viewed as a measure of the individual's success both in the socialization process and in the process of personality development. Thus pupils who achieved at a level above that expected of them generally were thought to be exhibiting positive aspects of social maturity. Because of noted challenges (e.g., Nettler, 1968, personal communication) to the attaching of positive connotations to such "overachievement", the question arises, "Do such connotations have bases in fact?" That is, other conditions being equal, can relatively high academic achievement be used as a guide to the general adjustment of students? Or, closer to the point of the present study, can relatively low academic achievement be used as a guide to the general maladjustment of students?

In apparent agreement with the above, many researchers (Blackham, 1955; Gibbs, 1965; Keimowitz and Ansbacher, 1960) have found social maturity to be statistically positively related to academic achievement. Also, in the present writer's experience the "tendency toward sociability and the seeking of social contacts" ("extraversion" as defined by Lavin, 1965, p. 88) has often been noted by teachers in association with social maturity. Additionally, alienation has been found to be negatively related to the acquisition of meaningful information, (Seeman, 1962, 1963, 1966, 1967).

In apparent contradiction to the above connotations, Maslow's (1954) formulation of self-actualization, the tendency for an individual to become what he is potentially, seems to incorporate a degree of introversion and alienation as a positive aspect. A further contradiction stems from the finding that introversion, a shyness and tendency to withdraw from social contact, has been found significantly and positively related to academic achievement on the college level (Bendig, 1960; Bloomberg, 1955; Broadbent, 1958; Eysenck and Eysenck, 1968; Furneaux, 1957; Gebhart and Hoyt, 1958; Gough, 1949; Lynn, 1959; Lynn and Gordon, 1961; Kerns, 1957; Krug, 1959; Merrill and Murphy, 1959; Travers, 1949). Are similar relations to be found at the high school level? Lavin (1965) has stated in respect to introversion that research on other levels is "practically nonexistent".

Alfred Adler's (Ansbacher and Ansbacher, 1964) formulation of social interest as "the interest in, or feeling with, the community sub specie aeternitatis ["under the aspect of eternity"]" would seem to offer a possible explanation of the previously-mentioned apparent

contradictions by viewing the introversion and "alienation" aspects of the scholar and self-actualizer (assuming that such introversion and "alienation" are positive variables in the scholar and self-actualizer) as means or mode in which the individual strives for an ideal future community rather than the present not-so-ideal community. Such a view cautions one from the overly-simplified assumption that we are always dealing with a sick person and a well society. However, Adler's formulation of social interest has been postulated (Ansbacher, 1956; Davol and Reimanis, 1959) to be inversely related to both alienation and anomie--two concepts which, in the present writer's view, may be related to introversion.

THE PROBLEM

The present study proposes to examine some aspects of the possible interrelationships among measures of alienation, introversion, and academic achievement of Grade Ten (Edmonton Separate School Board) students, statistically controlling for sex and socio-economic status and experimentally controlling for scholastic aptitude. The emphasis primarily will be on "alienation"--a term widely, and loosely, used in fictional and nonfictional literature, in the current popular press, and in the psychological and sociological journals. The present study will view alienation as a syndrome whose main component is a subjective feeling of being powerless in the control of both events impinging upon the individual and in the ability to alter or influence these events by one's own actions.

Commenting on the possible reasons for the current popularity of the concept of alienation, Seeman and Evans (1962) have noted that the "theme of alienation dominates a substantial segment of classical sociological work" (p. 772) and that its variants, (powerlessness, meaninglessness, normlessness, value isolation, self-estrangement; Seeman, 1959), "turned about, represent a powerful array of humanistic values: mastery and autonomy; insight and understanding; order and trust; consensus and commitment; integrity and involvement," (Seeman and Evans, 1962).

Dealing with the present research being done concerning one aspect of alienation (the construct of internal vs. external control of reinforcement), Lafcourt (1966b) has noted:

. . . It is no mean coincidence in time that writers such as Piaget (Flavell, 1963) and Michotte (1963) have also been doing extensive research into the causal relationships which Western man imposes upon his world; and that psychotherapists such as Adler (Ansbacher and Ansbacher, 1956) have concerned themselves with man's development of mastery. White's concern with effectance and competence mirrors this same focus of interest in personality psychology (p. 217).

Seeman (1963) has suggested that the idea of "alienation" bridges the interests of social psychology in the problem of social learning and sociology in the problem of the socialization process. As Seeman and Evans (1962) also have pointed out, up to now the argument for the significance of alienation has rested largely upon inferential bases. Defining academic achievement as a behavioral variable, the present study seeks to demonstrate a behavioral significance of alienation. Indeed, Jackson and Strattner (1964) have stated that:

. . . feelings of alienation are more closely related to the social experience of the learner, particularly to race and social class, than are many of the more traditional psychological variables, such as anxiety and hostility (p. 525).

The more general significance of the present study derives from the generally accepted fact that with the advent of Sputnik and the consequent growth of the academic subculture in the high school (Clark, 1962) the consequences of academic achievement are much more pronounced than formerly when the fun and delinquent sub-cultures held greater sway with students. In the above connection one is reminded of Bettelheim's (1961) observation:

. . . with the whole pressure of school, parents, educational system, and society at large favouring success in learning, it often takes a great deal more determination on the part of the non-learner to fail than for the good learner to do well in school (p. 393).

Also, working on the assumption that the school environment is important for the individual in the acquiring of a sense of identity, it is postulated that, although academic achievement is only one of the identity-fostering factors in the school setting, academic achievement is an important variable meriting investigation. Moreover, it would appear to the present writer that information aiding society, parents, and educators better to understand some of the correlates of academic achievement is in demand. The present study will aim at illumination of some such aspects.

The study is organized along the following lines. Chapter II presents a review of both empirical and nonempirical views of alienation and introversion. The review of alienation is emphasized and also includes some of the research done on the possibly-related

concept of anomia. Chapter III deals with the definitions used in, and rationale of, the present study and also presents a summary of the hypotheses to be tested. Chapter IV presents the manner in which the data of the present study were collected and analyzed. Chapter V presents the results and discussions of the analyses. The summary, conclusions, and implications of the study are presented in Chapter VI.

EXPECTED OUTCOMES

Does our society show signs of moral breakdown? Are we adrift, wandering without clear goals, out of touch with the cherished values that make up our heritage? Are the ties that bind us together in networks of mutual care and sympathy dangerously strained and weakened? (McClosky and Schaar, 1965, p. 17)

Such themes are fashionable today in discussions on education (e.g., Goldman, 1968; Henderson, 1967; Jackson, 1965). However, the present thesis is designed to answer questions neither on the general state of society nor for, that matter, the general state of (Edmonton Separate School Board) students. Rather, the design of the present study encompasses that aspect of alienation and introversion as related to academic achievement among Edmonton Separate School Board Grade Ten students.

More specifically, do ESSB Grade Ten students function better academically amid feelings of powerlessness and feelings of social isolation? In fostering academic excellence, do our schools wittingly or unwittingly foster desired personality correlates? Also, in discussing personality correlates of academic achievement, can we discuss as a unit both boys and girls? individuals in various socio-

economic classes? individuals of various academic aptitude levels?

Regardless of the relation, or lack of relation found among the variables being tested, it is hoped that the findings of the present study will encourage educators to continue in their re-evaluation of the schools' explicit and implicit educational objectives in respect to academic achievement and personality development.

CHAPTER II: RELATED RESEARCH AND LITERATURE

NON-EMPIRICAL VIEWS

Alienation

A consideration of some of the many different interpretations of the term "alienation" crosses various academic disciplines-- philosophy, sociology, psychology, religion, literature, and history. English and English (1958) defined alienation as the "loss or lack of relationship, especially where or when relationship is to be expected". In A Dictionary of the Social Sciences (Gould and Kolb, 1964) Kurt Lang stated:

Alienation as most generally used in social science, denotes an estrangement or separation between parts or the whole of the personality and significant aspects of the world of experience.

Within this general denotation the term may refer to (a) an objective state of estrangement or separation; (b) the state of feeling of the estranged personality; (c) a motivational state tending toward estrangement.

The separation denoted by the term may be between (a) the self and the objective world; (b) the self and aspects of the self that have become separated and placed over against the self, e.g., alienated labour; (c) the self and the self (p. 19).

Generally, the definitions of alienation as used in the sociological-psychological literature may be loosely structured by viewing alienation as being composed of three interlinked forms--man's alienation from himself, from other men, and from nature. As Pappenheim (1957) and others suggest, these three forms may actually represent three phases of one process.

Goldman (1968) has interestingly sketched the American educational consequences of the above three forms of alienation:

. . . the traditional school as a response to alienation from God; the academy, to alienation from nature; the Common School, to alienation of groups from each other; the nursery and adult education, to alienation from Community; the polytechnic school, to alienation from work; and Summerhill, or the guidance-dominated school, to alienation from affect (p. 339).

Historically, Hegel suggested the term alienation as descriptive of the detachment of socialized man from both the world of nature and of his own nature (Nettler, 1957). Karl Marx, with whom the term alienation seems most associated, is credited with bringing the term from the abstract ontological context of German philosophy to the concrete social situation of the alienating process of labour. Marx stated that modern mass production techniques separate the worker from the products and processes of work from himself and from others as well. Along with Kierkegaard, who gave alienation a religious context, and other existential philosophers, Marx was concerned with "the apparently increasing process of fragmentation and depersonalization of the individual in complex society" (Mizruchi, 1964, p. 28).

"Fromm, like Marx, . . . is directly concerned with the complex problem of achieving a meaningful, productive experience for the individual in modern society" (Mizruchi, 1964, p. 31). Alienation was the central theme of Fromm's book, The Sane Society, in which he defined alienation as:

a mode of experience in which the person experiences himself as an alien. He has become, one might say, estranged from himself. He does not experience himself as the center of his world, as the creator of his own acts--but his acts and their consequences have become his masters, whom he obeys, or whom he may even worship. The alienated person is out of touch with himself as he is out of touch with any person. He, like the others, is experienced as things are experienced; with the senses and with common sense, but at the same time without being related to oneself and to the world outside productively (1955, pp. 120-121).

The definition of alienation as used by Grodzins (1956) was:

the state in which individuals feel no sense of "belonging" to their community or nation. Personal contacts are neither stable nor satisfactory (from Nettler, 1957, p. 671).

Davids (1955a) stated that alienation is a syndrome

. . . composed of the following five interrelated dispositions: egocentricity, distrust, pessimism, anxiety, and resentment . . . alienated subjects are "lone wolves" with grievances, distrustful of their fellow men, apprehensive and gloomy in their anticipations of the future . . . tend to apperceive other people in their social environment as being more alienated than they really are, yet less alienated than themselves . . . (p. 27).

Karen Horney described alienation as "the remoteness of the neurotic from his own feelings, wishes, beliefs, and energies" (1949).

In an attempt to bring some order to the concept of alienation Seeman (1959) set up five categories in which alienation might be broken down and, possibly, empirically tested:

1. Powerlessness--"the expectancy or probability held by the individual that his own behavior cannot determine the occurrence of the outcomes, or reinforcements, he seeks" (1959, p. 784). [It is this category of alienation that has received the most attention in Seeman's later works, e.g., 1962, 1963, 1966, 1967, and which the present writer has the most interest. To Seeman's category of "powerlessness" Clark, 1959, added the notion of legitimacy: "Alienation is the degree to which man feels powerless to achieve the role he has determined to be rightfully his in specific situations". That is, the powerlessness aspect of alienation is estrangement of man from his rightful role.]
2. Meaninglessness--". . . is characterized by a low expectancy that satisfactory predictions about future outcomes of behavior can be made" (1959, p. 786).
3. Normlessness--"the goals set for the individual by the culture are not congruent with the means for achieving them . . . (Normlessness is) the point at which 'alienation' and 'anomie' overlap" (1959). [Normlessness, according to Seeman, emphasizes the expectation that illegitimate means must be employed to realize culturally prescribed goals. It has been suggested by Dean, 1961, that "normlessness" may be subdivided into the concepts of "purposelessness" and "conflict of norms".]

4. Isolation---"is the assignment of low reward value to goals or beliefs that are typically highly valued in the given society" (1959, p. 789). [This can be either physical, such as the case of the socially mobile person, or psychological, or both.]
5. Self-estrangement---"the degree of dependence of the given behavior upon the anticipated future rewards . . . the inability of the individual to find self-rewarding, the activities that engage him" (1959, p. 790). [According to Reisman, 1955, it is generally characterized as loss of intrinsic meaning or pride in work. Hobart (1965) views self-estrangement as implying absence of integration within the personality of the individual.]

Much of the more recent work of Seeman (1962, 1963, 1966, 1967) and others (Crandall, Katkovsky, and Preston, 1962; Battle and Rotter, 1963; Bailer, 1961) has been centered on the "powerlessness" (little personal control over external events) aspect of alienation. These studies have used variations of the Internal-External Control Scale developed by Leverant et al and more recently revised by Rotter, Seeman, and Leverant (see Rotter, 1966).

Nettler (1957) conceived alienation as disenchantment with some prevailing attitudes and non-participation in institutionalized, political, religious, and family activities. He defined alienation as a psychological state of mind in which the alienated person "has been estranged from . . . his society and the culture it carries".

Srole (1956) developed a scale (See Appendix B) to measure on a eunomia-anomia continuum--self-to-other belongingness at one pole, to self-to-other distance or alienation at the other pole. Srole referred to "self-to-others alienation" as the common element in Durkheim's various forms of suicide. Mizruchi (1964) has observed that Srole was the first



sociologist to have made a systematic effort to devise an index to Durkheim's concepts (p. 53). Srole's scale appears to be concerned with the estrangement aspect of alienation as distinguished by Bell (1959):

The idea of alienation . . . has a double meaning which can best be distinguished as estrangement and reification. The first is essentially a socio-psychological condition in which the individual experiences a sense of distance, or a divorce from his society or his community; he cannot belong, he is deracinated. The second, a philosophical category with psychological overtones, implies that an individual is treated as an object and turned into a thing, and loses his identity in the process; in contemporary parlance, he is depersonalized. The two shades of meaning, of estrangement and depersonalization, are sociologically quite distinct (p. 933).

A concept which appears to have often been confused with alienation is that of "anomie". Anomie may be considered a sociological concept most often associated with Emile Durkheim, who defined it as "normlessness or ruthlessness in a society [*italics added*], resulting from society's failure to curb man's inborn impulses;" (Davol and Reimanis, 1959, p. 215). The reader will note that anomie is thus seen as a social state of normlessness:

in which the society's norms and goals are no longer capable of exerting social control over its members, and the individual rather than the group, must now determine for himself what goals should be sought and in what degree . . . (Mizruchi, 1964, p. 45).

The confusion between alienation and anomie seems to arise:

from the "two broad categories of definition" of anomie which "can be distinguished in contemporary social-scientific works: subjective, social psychological definitions and objective, sociological definitions. As with alienation, the subjective involves a state of mind, while the objective involves condition of the whole or parts of society (Mizruchi, 1964, pp. 45-46).

Mizruchi (1964) has noted that both Durkheim and Merton involve social and cultural phenomena distinct from personal processes in their

use of the concept of anomie. For example, Merton (1964) conceived of anomie as:

. . . a breakdown in the cultural structure, occurring particularly when there is an acute disjunction between the cultural norms and goals and the socially structured capacities of members of the group to act in accord with them (p. 162).

There is thus a clear distinction between the objective sociological aspects of anomie and the solely subjective concept of alienation, defined as a subjective state, characteristic of an individual's mental states and feelings. Nettler (1957) also emphasized the above distinction.

The similarity between the social-psychological definitions of anomie and the concept of alienation described by Marx may be noted in the following social-psychological concepts of anomie.

Anomie as Durkheim conceived it in the subjective sense had three characteristics, a painful uncasiness or anxiety, a feeling of separation from the group or of isolation from group standards, a feeling of pointlessness or that no certain goals exist (DeGrazia, 1948, pp. 4-5).

Meaninglessness and uselessness in social structure . . . constant conflict between the basic goals in life, and (withdrawal) . . . from society (Reimanis, 1965).

Anomie signifies the state of mind of one who has been pulled up from his moral roots, who has no longer any standards but only disconnected urges, who has no longer any sense of continuity, of folk, of obligation. The anomic man has become spiritually sterile, responsive only to himself, responsible to no one (MacIver, 1950, p. 84).

[Anomie is a] lack of identification on the part of the primary ego of the individual with a "self" that includes others. In a word, modern man appeared to be suffering from psychic isolation. He felt alone, cut off, unwanted, unloved, unvalued (Lasswell, 1952, p. 132).

[Anomie is] a feeling that in the face of social and personal disintegration life is not worth living . . . feeling of confusion,

frustration, and despair (Elmore, 1963). . . . most characterized by a feeling of meaninglessness, coupled with feelings of valuelessness, hopelessness, powerlessness, aloneness, and closedmindedness (Elmore, 1965, p. 359).

[Anomie is] an individual's psychological incapacity to adjust to cultural norms and to work for the common good (Riesman, 1955; MacIver, 1950).

To summarize the above mainly non-empirical views of alienation and anomie, it could be stated that alienation is generally viewed as a subjective psychological concept whereas anomie is largely viewed as an objective sociological concept. However, subjective-psychological views of anomie (Srole's "anomia" and McClosky-Schaar's "anomy") are also prevalent. It is because of the inconsistency of the use of the terms "anomie", "anomia", or "anomy", when what actually is being discussed could possibly better be described as "alienation", that the present writer felt the treatment of the term "alienation" would be enhanced by the additional treatment of the terms "anomie", "anomia", and "anomy"--particularly "anomia". In short, the terms have been variously defined and used by various writers, and there appears to be lack of agreement as to what any particular alienation, or anomie, or anomia, or anomy scale actually measures.

Introversion

Although there is still some disagreement as to the construct validity of Eysenck's Introversion-Extraversion subscale of the EPI, much more theory and research has been generated concerning support for Eysenck's concept of introversion than has been generated in support of the multitude of "alienation" scales.

English and English (1958) stated that three aspects are commonly distinguished in extraversion-introversion: "direction or interest and attention outward or inward, ease or difficulty of social adjustment, tendency to open or to secretive behavior" (p. 197).

The Random House Dictionary of the English Language (1966) defined introversion as "the state of being concerned primarily with things within the self, with one's own thoughts and feelings rather than with the external environment" (p. 747).

Eysenck and Eysenck (1968) described the typical introvert as:

. . . a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, "looks before he leaps", and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness, and likes a well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner, and does not lose his temper easily. He is reliable, somewhat pessimistic, and places great value on ethical standards (p. 6).

They also described relationships between constitutional and behavioral aspects of extraversion-introversion

. . . at the most fundamental level we have the constitutional concept of the excitation-inhibition balance, which may be tilted in one direction or the other to give rise to constitutional, genotypic differences in extraversion-introversion; these may with some degree of accuracy be measured in terms of conditionability, vigilance, figural after-effects, and other laboratory phenomena. Observable behavior is a function of these constitutional differences in interaction with the environment; this interaction gives rise to descriptive, phenotypic differences in extraversion-introversion, which can best be measured in terms of inventories such as the EPI. This differentiation between laboratory tests and inventories as being more closely related to genotypic and phenotypic aspects of personality respectively is not, of course, an absolute one, but may nevertheless be useful in thinking about the meaning of the results achieved with the use of the different types of measuring instruments (p. 7).

EMPIRICAL STUDIES

Alienation

In respect to alienation and achievement, Bryde (1965) found significant negative correlations of alienation (as measured by Dean's Alienation Scale; See Appendix A) to achievement scores on the Iowa Tests of Educational Development. His sample consisted of 55 boys and 50 girls in grades nine through twelve on the Pine Ridge reservation, South Dakota. Also, possibly related to achievement is Davids (1955b) finding, guided by the hypothesis that personality or motivational variables influence cognitive functioning:

 Ss who are diagnosed clinically as being high on the alienation syndrome tend to be sensitized to, fixate upon, and accentuate the relative importance and quantity of spoken ideas and statements that are expressive of dispositions in the syndrome (p. 64).

Gibbs (1965) found failing university students to be characterized by social maladjustment; i.e., inadequate social habits rather than neurotic symptoms. He also found that such students had negative attitudes toward others, had little interest in community affairs, and were intolerant of laws and regulations.

The finding of Gibbs appears to substantiate Newcomb's (1943) Bennington study which showed that:

 . . . persons who had acquired the "proper" values and beliefs were more readily accepted by the members of a group and more easily attained prestige positions within the group. (McClosky and Schaar, 1965, p. 22)

In the above regard, McClosky and Schaar (1965) state:

 . . . persons who fail to learn the dominant values of a group, or who hold beliefs and opinions not widely shared, are not likely to be well received by group members. This in turn reduces

communication and makes socialization into the group even more difficult. A deviant lacks the intimate, vital experience of participation which is essential to full appreciation of the group's norms and values. His knowledge of those norms may be abstract and "theoretical", insensitive to subtle shadings of mood and meaning--a caricature rather than an accurate portrait. In addition, since the deviant sees a group that has rejected him only from the outside, he may also see its activities as senseless and incoherent (p. 22).

In a post factum analysis of their data using Srole's Anomia Scale (See Appendix B), Meier and Bell (1959) made the generalization that "anomia results when individuals lack access to means for the achievement of life goals". Their generalization appears somewhat in line with Merton's (1949) statement that "differential access to achievement of life's goals is productive of anomia" (Rhodes, 1964). Also in line with Merton's theory is the suggestion of McClosky and Schaar (1965) that a "useful approach might be to regard anomy as a by-product of the socialization process--as a sign of the failure of socialization and of the means by which socialization is achieved, namely, communication, interaction, and learning" (p. 39). Many other empirical studies (Killian and Grigg, 1962; McDill, 1961; Mizuchi, 1960; Roberts and Rokeach, 1956; Simpson and Miller, 1963) also have tended to support Merton's theory.

Drawing upon his clinical experience and upon Alfred Adler's formulation, Kurt Adler (Ansbacher and Ansbacher, 1956) posed the school "as one of the preliminary problems met in childhood". He stated that the problem of school to the adolescent corresponds to Alfred Adler's life problem of "occupation" to the adult, in that both provide tests of the "individual's preparation for social living" (p. 158). Ansbacher and Ansbacher (1956) suggest that Adler equated high and low achievement

in mathematics with higher and lower degrees of social interest, respectively. In testing such an hypothesis, Keimowitz and Ansbacher (1960) found that California Personality Inventory results with eighth grade under- and over-achieving boys were "well in agreement with Adler's observation regarding personality and mathematical achievement in children" (p. 87).

Dealing with the acquisition of pertinent information, Seeman and Evans (1962) found that white male tuberculosis patients scoring high in powerlessness (external control) had not learned so much about their illness and about the hospital and hospital life and work as those with low powerlessness scores. Seeman and Evans (1962) interpreted their data to mean that people who are oriented by luck or fate tend to be passive and yielding to the on-rush of life, whereas those persons who seek out information are behaving as though it were in one's capacity to control events through knowledge.

Seeman (1963) also found that fictional knowledge (knowledge which could not have been prior information) presented to federal reformatory inmates was differentially learned by those high and low in alienation (i.e., powerlessness). Further studies by Seeman (1966, 1967) would seem to support his thesis that "an individual's generalized expectancy for control of his outcomes (i.e., his sense of powerlessness) governs his attention to, and acquisition of, information available in the environment" (1967, p. 105)

Crandall, Katkovsky, and Preston (1962), studying primary grade children, found that scores on the Children's Intellectual Achievement Responsibility Questionnaire were more closely related to achievement-

related activities (time spent in intellectual free-play pursuits, $r = .70$, $p < .05$, $N = 20$; intelligence test performance, $r = .66$, $p < .05$; and reading, $r = .51$, $p < .05$; and arithmetic, $r = .38$, $p < .10$, test performance) than were measures of general manifest anxiety and need achievement. This finding, however, held for boys but not for girls. The Children's Intellectual Achievement Responsibility Questionnaire is a test adapted for primary grade children from the one used by Seeman and Evans, 1962, and designed to assess the degree to which children perceive their successes and failures to be the result of their own efforts or to be caused by what others did.

The above studies by Seeman et al are congruent with the findings of Rotter and his colleagues (1961, 1963, 1966, 1968) that "the learning pattern is quite different under conditions where the subject conceptualizes the problem as one involving his personal control or skill rather than one that is governed by chance factors or experimenter control". That is, the tendency to perceive success or failure as resulting from outside forces rather than effort on one's own part has been found to be more characteristic of those who fail in school than of those who succeed (from Jackson, 1965). Parenthetically, the present writer hopes that in a later study he will be able to more adequately consider some of the implications of the work of Rotter (1966) and the related studies in learning theory (e.g., Blackman, 1962; Cohen, 1960; Feather, 1959; Goodnow and Pettigrew, 1955; Goodnow and Postman, 1955; James and Rotter, 1953; Phares, 1957, 1962; Rotter, Liverant, and Crowne, 1961; Wychkoff and Sidowsky, 1955).

In summary, the empirical studies cited above (Bryde, 1965; Crandall et al, 1962; Seeman and Evans, 1962; Seeman, 1963, 1966, 1967, 1968) would seem to support the hypothesis of a significant negative relation between measures of alienation and academic achievement.

Introversion

Vernon (1965) has noted:

Among English college students both introversion and neuroticism correlate appreciably with academic achievement (p. 294).

Along similar lines, Ringness (1965), in dealing with effective differences between successful and non-successful bright ninth grade boys, concluded that non-successful boys failed to accept school and parental norms for academic achievement and hold it more important to be popular among peers.

Gibbs (1965) summarized from American studies three dominant characteristics of failing American college students, viz., (1) extraverted-gregarious activity; (2) low study motivation; (3) social irresponsibility. He described "social irresponsibility" as "denial of normal shortcomings, low feeling of social responsibility" social insensitivity, irresponsibility, self-centeredness, disregard for convention, attitudes of hostility, hypercritical attitudes".

Another researcher (Gough, 1949) reported introversion and lack of maladjustment among high school achievers, and reported social extraversion and a tendency to see others in a favourable light among underachievers. Parenthetically, seeing others in a favourable light is not the usually reported finding among underachievers.

In studying the use of biographical information in predicting success in high school science, Cline et al (1964) have stated:

Stein (1956) and Roe (1951, 1953) have both reported life history data for scientists which indicated as a basic factor in success in science a feeling of apartness from others which took different forms and which seemed to have a number of different causes, i.e., childhood feelings of isolation, a pattern of general avoidance of intimate personal contacts . . . a decided preference for a very limited social life (p. 395).

Finally, reviewing areas in which extraverts differed from introverts in ways which would be expected to have an effect on educational achievement, Lynn and Gordan (1961) listed four major characteristic differences:

. . . (a) learning speed, with introverts appearing to form conditioned responses more quickly than extraverts [supported by Franks (1957) and Vogel (1961) in Eysenck and Eysenck, 1968], (b) intelligence, with neurotic introverts tending to be more intelligent than neurotic extraverts, (c) work decrement, with introverts being superior to extraverts in tasks requiring sustained work or attention, and (d) accuracy and speed, with introverts undertaking tasks slowly and accurately while extraverts are quick and inaccurate (Eysenck and Eysenck, 1968, pp. 21-22).

In respect to the relation of introversion to academic achievement, with the exception of Gough's 1949 study, the work done at the secondary school level (Ringness, 1965; Blackham, 1955; Cline et al, 1964; McClosky and Schaar, 1965) would seem to have only inferentially supported a positive relation at the high school level. Studies at the college level, however, have more directly found a significant positive relation between introversion and academic achievement (Gibbs, 1965; Gould, 1965; Vernon, 1965; cf. supra, p. 20).

CHAPTER III: DEFINITIONS, RATIONALE, AND HYPOTHESES

Alienation, introversion, and academic achievement are the three main variables of the present study. Other variables to be controlled and considered are socio-economic status, sex, grade level, and scholastic aptitude.

Viewing academic achievement as a behavior variable emanating from the individual's contact with the school and thus with society, the major research questions of the present thesis are: to what extent is academic achievement associated with introversion and "alienation" measures?

DEFINITIONS OF TERMS

Alienation

Alienation, as used in the present study, refers to a psychological state of feeling victimized resulting from an interactional situation which the alienated person feels is not meeting his needs. The alienated person believes that the powers that give direction to his life do not depend upon himself but rather depend upon luck, chance, fate, more powerful others, the unpredictable. The alienated person feels that he does not have control over his own successes and failures--over his own destiny. Such a view of alienation appears compatible with Fromm's (1955) description of the alienated individual as one who feels himself to be the servant rather than the master of his own behavior (cf. supra, p. 9). Also, such a view of alienation appears compatible with the more recent work of Seeman, Rotter, Lefcourt and

others (cf. supra, pp. 18-19) who have focused on the "powerlessness" aspect of alienation.

Parenthetically, the present study is more concerned with alienation as a pervasive quality within the individual than with alienation situationally confined within the school setting. Alienation from oneself, from others, from nature and God, are considered to be intertwined. Also, the determination of the specific area of experience that served as the origin of the "disorder" is not within the scope of the present paper. Thus, viewing alienation more as a perceptual set which once aroused permeates the individual's social and intellectual activity--as an embedded style of life which permeates all of the individual's thinking and behavior,--as a pervasive biased apperception,--the question, "Alienation from what?", although an important question in its own right, is not a consideration of the present study.

Academic Achievement

The academic achievement variable will be specifically the aggregate mark obtained on the 1967 Grade Nine Alberta Department of Education Final Examinations. These examinations are written by all Grade Nine pupils in the province of Alberta, are all marked by the Examination's Branch in Edmonton, Alberta, and the results are reported to the pupils in stanines. Such a measure of achievement is superior to published standardized tests of achievement in that the results of the provincial examinations more readily reflect the individual's actual as opposed to potential school achievement throughout the

previous year. The aggregate mark is postulated to be the best measure of the pupil's overall achievement level.

Introversion

Introversion is viewed as the directing of one's thoughts inward and the tendency to withdraw from social contact. It is operationally defined as the score obtained on the Extraversion-Introversion (See Appendix C) subscale of the 1968 Eysenck Personality Inventory (EPI).

Scholastic Aptitude

Scholastic aptitude will be measured by the Co-operative School and College Ability Test, (SCAT), Level 3. The SCAT is a recognized standardized scholastic aptitude test which is administered annually to all Alberta Grade Nine students solely through the Provincial Department of Education.

Socio-Economic Status

On the basis of the Pineo-Porter Occupational Prestige Scale scores (See Appendix F), the individuals comprising the present sample were divided into Upper (score less than 37.2), Middle (score greater than 37.1 and less than 52.0), and Lower (score greater than 51.9) Socio-economic Status (SES) groups. The present writer originally planned to divide the sample into two SES groups with the cut-off point being the median on the Pineo-Porter measure. However, on since classifying individuals on the Pineo-Porter Scale and viewing the crudeness of such a measure with the resulting probable overlapping of levels, it was thought that the dividing of the present sample into

three groups would better facilitate comparisons of at least the two extreme groups.

RATIONALE

Introversion and Academic Achievement

It has been found that the student tending toward the introversion end of the extraversion-introversion continuum will be more inclined toward academic pursuits than the more extraverted student. It would seem that the great fondness for books, less outgoing and less socially active behaviors of the relatively introverted individual would more readily foster the undertaking of academic pursuits than the corresponding interests and behaviors of the more extraverted individual. As such, a significant positive relation between introversion and academic achievement is hypothesized.

Alienation and Academic Achievement

Once the feeling of "alienation" is situationally aroused, it becomes an enduring perceptual set which tends to permeate the individual's whole existence. If the student generally feels that he has little control of his achievement status, and thus feels that both his gains and losses are a function of what others have done to him, it is postulated that he will not maximally gain from the intrinsic "reward" system (the feeling arising from the growth of ability) operating in the classroom. That is, it is contended that the feeling of alienation within the individual is a detriment to positive academic achievement and it is hypothesized that a negative linear relationship

exists between alienation and academic achievement. Although a negative linear relation is hypothesized, the possibility of a curvilinear relationship is not entirely overruled and will be investigated.

Alienation and Introversion

Gould (cf. supra, p. 21, 1965) has found alienation to be positively related to social introversion among college students. However, was the measure of both introversion and alienation as used by Gould compatible with the measures used in the present study? Also, assuming for the moment that they were, would such a relation hold at the high school level as well as the college level? To the present writer's knowledge, no work has been done directly on determining the possible relation between Eysenck's measure of introversion and the various measures of alienation at any of the school levels.

It would seem that some communality may exist between Eysenck's (EPI Manual, 1968) description of the typical introvert as:

. . . a quiet, retiring sort of person, introspective, fond of books rather than people; reserved and distant except to intimate friends . . . somewhat pessimistic (p. 6).

and descriptions of the alienated individual as being:

indifferent toward others . . . feeling lonely and distant from others . . . feeling pessimistic . . . feeling detached (Davids, 1955; Gould, 1965; McClosky-Schaar, 1965; Pappenheim, 1964).

As such, a significant positive relation between alienation and introversion is hypothesized.

Other Variables

1. Socio-Economic Status

Franklin (1963) and Battle and Rotter (1963) found significant relationships between higher socio-economic classes and internality (i.e., the perception on the part of the individual that events are contingent upon his own behavior or his own relatively permanent characteristics). Such measures of internality have been used by Seeman (1962, 1963, 1966, 1967) with similar results.

Using a sample of 384 adults, Dean (1961) found statistically low but significant negative correlations between social status (as measured by a modified version of the North-Hatt Occupational Prestige Scale) and his powerlessness and normlessness subscales and his total score alienation scale. Income and amount of education attained were found to be correlated negatively and significantly with Dean's Social Isolation subscale as well as his other subscales and total score scale.

Using the Srole Anomia Scale, negative associations have been found between anomia and social class identification (Meier and Bell, 1959; Mizuchi, 1960) and social and economic status (Srole, 1956). Using their own anomy scale, McClosky and Schaar (1965) have also found a negative relation between anomy and socio-economic status.

The present writer both notes that socio-economic status is an important variable to be controlled and hypothesizes a negative relation between socio-economic status and alienation.

2. Sex

In respect to the relation of introversion to sex, the Eysencks (1968) reported that "items giving large sex differences were eliminated

during the construction of the inventory" (p. 15). Thus, no sex differences are expected in respect to the introversion measure.

In respect to the relation of alienation to sex, Meier and Bell (1959), Mizruchi (1960), and Rhodes (1964) have found girls to have higher (but statistically non-significant) anomia scores than boys. Sklarow (1959), emphasizing possible personality differences between boys and girls, stated:

With regard to girls, Parson (1946) and Schoeppe (1953) stress that their motivation is toward outer conformity to adult expectations, in contrast to boys, who are allowed to release more aggressive impulses. McClelland and others (1953) found that the achievement motive of girls is increased during situations of social rejection, but for boys it is unaffected by social rejection (p. 404).

Crandall, Katkovsky, and Preston (1962) found that primary grade girls were more prone to assign responsibility to themselves for results eventuating from intellectual achievement efforts than were primary grade boys. That is, the primary grade girls studied tended to view intellectual achievement as being more internally controlled than did primary grade boys.

It is thus possible that non-significant sex differences may be found in the direction of high alienated girls having lower achievement scores than the comparable group of boys, and also in the direction of higher "alienation" scores among girls than among boys. Although no significant sex differences are hypothesized, the present study will control for sex as a precautionary measure---a measure that, in the present writer's opinion, is too frequently ignored.

3. Scholastic Aptitude

Crandall, Katkovsky, and Preston (cf. supra, p. 19, 1962) using primary grade children, and Bialer (1961) using mentally-retarded and normal children, found significant positive relations between intelligence and perceived internal control of reinforcements. Also, McClosky and Schaar (1965) concluded from their study that level of cognitive functioning (measures of years of formal schooling, "intellectuality", "awareness", "mysticism", "acquiescence" and anomy were inversely related. The findings of Rotter (1966), Seeman (1963), and Seeman and Evans (1962), however, did not support such a relation.

Because of the apparent disagreement as to the relation of alienation and academic aptitude and thus the possibility that a relationship may exist, the present study will experimentally control for academic aptitude.

SUMMARY OF HYPOTHESES

Major Hypotheses

1. Introversion and Academic Achievement:

A statistically significant positive relation exists between introversion and academic achievement, (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

2. "Alienation" and Academic Achievement:

A statistically significant negative linear relation exists between "alienation" measures and academic achievement, (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

Minor Hypotheses

3. "Alienation" and Introversion:

Statistically significant correlations exist between introversion and "alienation" measures.

4. "Alienation" and Sex:

No statistically significant sex differences exist in respect to "alienation" measures.

5. Introversion and Sex:

No statistically significant sex differences exist in respect to introversion.

6. "Alienation" and Socio-Economic Status:

A statistically significant negative linear relation exists between socio-economic status (SES) and "alienation" measures.

CHAPTER IV: EXPERIMENTAL DESIGN

SUBJECTS

The sample used in the present study consisted of 371 Edmonton Separate School Board (ESSB) Grade Ten students of average scholastic aptitude. Average scholastic aptitude was defined as a total SCAT percentile score between 42 and 72 as calculated from provincial examination norms and comprising the middle third of the ESSB Grade Ten population, (cf. supra, p. 24). The upper and lower thirds of the population are to be used in a future study.

The advantage of using the Grade Ten students arose from the available standardized achievement and scholastic aptitude scores from the province-wide examinations. A disadvantage of using a Grade Ten sample arose from the loss of the lower scholastic aptitude students who dropped out of the "academic" stream before writing the regular Grade Nine province-wide examinations.

Relevant characteristics of the obtained sample are shown in Tables I, II, and III. Viewing the tables, the reader will note the tendency for the girls to be generally younger and to have spent fewer years in school than the boys. Also to be noted is that the majority of the subjects reported to be in a high school program leading toward university entrance.

TABLE I
AGES OF SUBJECTS

AGE	NUMBER			PER CENT		
	Boys	Girls	Combined	Boys	Girls	Combined
14 and under	5	8	13	2.5	4.5	3.5
15	83	110	193	43.1	61.4	52.0
16	85	58	143	44.2	32.4	38.5
17	15	2	17	7.7	1.1	4.5
18 and over	5	1	6	2.5	0.6	1.5
Total	192	179	371			

TABLE II
NUMBER OF YEARS IN SCHOOL

YEARS	NUMBER			PER CENT		
	Boys	Girls	Combined	Boys	Girls	Combined
9 and under	11	16	27	5.7	8.9	7.2
10	150	155	305	78.1	86.6	83.4
11	29	7	36	15.1	3.9	9.6
12	2	1	3	1.1	0.6	0.8
Total	192	179	371			

TABLE III
HIGH SCHOOL PROGRAM PATTERN

PROGRAM	NUMBER			PER CENT		
	Boys	Girls	Combined	Boys	Girls	Combined
Matriculation	136	129	265	70.9	72.0	71.5
General	22	10	32	11.5	5.6	8.6
Vocational	23	--	23	11.9	--	6.2
Business Ed.	10	39	49	5.2	21.8	13.2
Other	1	1	2	0.5	0.6	0.5
Total	192	179	371			

INSTRUMENTS

The instruments used in the present study were Eysenck's Extraversion-Introversion subscale of the Eysenck 1968 Personality Inventory, Dean's Alienation Scale, Srole's Anomia Scale, McClosky-Schaar's Anomy Scale, and Thorne's Humanistic Identification Scale. The reader can refer to Appendices A, B, C, D, and E for information regarding each of the above scales. The randomly ordered items of the above scales were combined into a single questionnaire arbitrarily named the "Alustap Questionnaire" (See Appendix G). Answers to the items of the questionnaire were recorded on IBM answer sheets to which were attached a sheet requesting demographic information. Pineo-Porter Occupational Prestige scores (See Appendix F) were calculated both on the basis of the obtained demographic information plus a local

occupation directory. Academic achievement scores used were the results obtained on the 1967 Grade Nine province-wide examinations. The reader will note the limitation arising from the eleven-month gap between the obtaining of the achievement measures and the personality assessments.

DATA COLLECTION

Permission was obtained from the Superintendent, the Supervisor of Guidance, and the Supervisor of Religious Education for the Edmonton Separate School Board (ESSB) to approach the Religious Education Co-ordinator in each of the six ESSB High Schools to solicit both their co-operation and, in turn, the co-operation of the teachers of Religious Education. Arrangements were thus made for the teachers to group administer the questionnaire (See Appendix G) to their respective Grade Ten Religious Education students. The administering of the instruments by the homeroom teacher during the Religious Doctrine periods may have had a biasing effect on the manner in which the students filled out the scales. However, both the attempt to meet the objective of minimal disruption of the individual school programs and the present writer's limited resources made the Religious Doctrine time preferable for the collection of the required data in the six ESSB High Schools concerned. The total testing time for any one student was less than fifty minutes. (An exception to the above fifty-minute limit was those students taking part in the retest for a reliability check of the questionnaire.)

The 1967 Final Examination marks (in stanines) were obtained from the Central Office of the ESSB.

STATISTICAL ANALYSES

Introduction

To the IBM Answer Sheet on which each student answered the Alustap Questionnaire (See Appendix G) the following data were added: four-digit identification; age; sex; present high school program pattern; number of years in school; academic achievement scores--aggregate, reading, literature, language, social studies, mathematics, and science; SCAT verbal stanine, quantitative stanine, and total percentile; Pineo-Porter SES score.

The IBM Answer Sheets were fed into the IBM 1230 Optical Mark Scoring Reader and coded IBM cards were generated. These cards were then subjected to a keyed reordering and decoding program using the IBM 360/67. The new cards thus generated were randomly checked against the original IBM Answer Sheets and were used for the subsequent analyses.

The cross-classification procedure used to report the relevant characteristics of the subjects was done manually with use of the IBM Card-Sorting Machine, whereas the bulk of the other analyses was carried out by means of the 360/67 Computer at the University of Alberta.

Factor Analyses

Factor analysis, a set of methods for analyzing a table of intercorrelations, is a mathematical technique which permits the factor analyser to consider several items or tests in terms of fewer, hopefully more manageable, dimensions. In the present study, the 38 items comprising the Dean, Srole, McClosky-Schaar scales were pooled, intercorrelations of the items were calculated, and factor loadings expressing the correlation between the items and the common variables (factors) were obtained. In short, the factors obtained were hypothetical constructs (or intervening variables) common to several items, whereas the factor loadings expressed the correlations between the items and the hypothetical constructs represented by each of the factors. The factors obtained were viewed as dimensions rather than substantial entities in themselves.

The actual verbal psychological meaning given to a particular factor was dependent upon the subjective judgment of the factor analyser in searching out the common thread intertwining the various items having the highest correlations with the factor. Such judgment was guided by the nature of the items with high (e.g., ± 0.500) loadings on the particular factor being studied, the manner in which some of these same items loaded highly (or lowly) on other factors in the analysis, and the psychological insight of the factor analyser.

For purposes of the present study, factor analysis was used as an exploratory device aimed at possibly uncovering more unitary scale(s) of alienation than those of Dean, Srole, and McClosky-Schaar.

1. Principal-Axis Factor Analyses

The present investigator made use of the principal-axis method of factor analysis, which maximizes the contribution of the factors to the total variance by each factor successively extracting as much variance as possible from the pooled items and thus making the residuals as small as possible after each factor is extracted. The principal-axis method thus yields the largest general factor which is mathematically possible from the correlation matrix of the items used. Four factors thus obtained were subjected to orthogonal rotation (cf. infra, p. 50).

2. Varimax Factor Rotation

Using Kaiser's (1958) varimax factor rotation, each successive factor was rotated orthogonally. Under the orthogonality restriction, the variance of the squared loadings of factors were thus maximized. Such orthogonal rotation facilitated the grouping of the pooled items into unique factors from which factor scores were obtained. The program used to obtain the factor scores computed four factor scores for each individual by means of the following equation (Division of Education Research Services program documented by Flathman, 1968).

$$F = S^1 R^{-1} Z$$

where F (r x N) factor score matrix
 S (n x r) factor structure matrix
 R (n x n) correlation matrix
 Z (n x N) standardized scores

for n variables, r factors, and N persons.
(where $n = 38$, $r = 4$, $N = 371$)

Such factor scores are, by definition, uncorrelated.

Test of Hypotheses Numbers One, Two, Four, Five, and Six

The data were subjected to Multiple Linear Regression analysis (Bottenberg and Ward, 1963) using the Multiple R^2 approach. The Multiple Linear Regression analysis was selected over the analogous analysis of variance because of the greater ease in working with the unequal cell frequencies expected in the data. The accepted level of significance in the testing of the various hypotheses was the .05 level.

The assumptions required of the Multiple Linear Regression approach are:

1. Predictor scores are fixed constants; criterion scores are random observations.
2. All " n " distributions from which the " n " criterion observations are drawn have the same variance, σ^2 . (The n normally and independently distributed variables with a common variance may possibly have different expected values μ , $i = 1, 2, \dots, n$.)
3. The errors are independent and normally distributed with mean zero and standard deviation one.
4. The y_i value associated with the i th person of the matrix of " n " complete sets of predictor information on " r " variables for the " n " sample members, in which elements designated $x_{i1}, \dots, x_{ir}$ is from a normal distribution with expected value, (y_i) , equal to $x_{i1}A_1 + \dots + x_{ir}A_r$. (Adapted from Ward, 1962, pp. 209-210).

The following model was used respectively with introversion and each of the relevant alienation factors as the criterion variable.

$$X_1 = k + A_2X(2) + A_3X(3) + A_4X(4) + A_5X(5) + A_6X(6) + A_7X(7) + A_8X(8) + A_9X(9) + \text{interactions} + e$$

where X_1 is a vector of the criterion variable in its raw score form;
 $X_2, X_3, \dots, X_9$ are vectors of predictor variables in their raw score form;
 $A_2, A_3, \dots, A_9$ are unknown raw score weights; and
 e is a raw score residual vector;
 k is a constant.

Essentially, the vector of the criterion data (respectively, introversion, Factor score measure I, Factor score measure II, Factor score measure III, Factor score measure IV, Dean's normlessness, Dean's powerlessness, Dean's social isolation, Dean's total, Srole's, McClosky-Schaar's, and Thorne's scales) was expressed as a linear combination of the dichotomized predictor variables (sex and SES).

- X(2) Male Group

X(3) Female Group

}

A (sex)
- X(4) Lower Academic Achievement Group

X(5) Middle Academic Achievement Group

X(6) Upper Academic Achievement Group

}

B (achievement)
- X(7) Lower Socio-economic Status Group

X(8) Middle Socio-economic Status Group

X(9) Upper Socio-economic Status Group

}

C (SES)

The actual analysis initially attempted to find a set of weights ($A_2, A_3, \dots, A_9$; called "least square weights") which would minimize the sum of squares of the elements of the residual vector e .

More specifically the following nine models were used with dichotomous vectors generated by Datran subroutines:

	d.f.
1. $k + A + B + C + AB + BC + AC + ABC + e_1$	18
2. $k + A + B + C + AB + BC + AC + e_2$	14
3. $k + A + B + C + AB + AC + e_3$	10
4. $k + A + B + C + AB + BC + e_4$	12
5. $k + A + B + C + BC + AC + e_5$	12
6. $k + A + B + C + e_6$	6
7. $k + A + B + e_7$	4
8. $k + A + C + e_8$	4
9. $k + B + C + e_9$	5

F-ratios were calculated with each of the twelve dependent variables using the following combinations of the above models:

$$F_1 = \frac{\text{Model 1}}{\text{Model 2}}$$

$$F_5 = \frac{\text{Model 6}}{\text{Model 7}}$$

$$F_2 = \frac{\text{Model 2}}{\text{Model 3}}$$

$$F_6 = \frac{\text{Model 6}}{\text{Model 8}}$$

$$F_3 = \frac{\text{Model 2}}{\text{Model 4}}$$

$$F_7 = \frac{\text{Model 6}}{\text{Model 9}}$$

$$F_4 = \frac{\text{Model 2}}{\text{Model 5}}$$

Thus the single 3-way interaction, the three 2-way interactions, and the three main effects were step-wise accounted for.

It may be added that F-ratio Numbers One through Four were calculated merely as precautionary measures. Apart from cautioning one in the interpretation of possible additional significant 2-way interactions and main effects, no attempt was made to interpret any significant 2-way or 3-way interactions. Essentially, the present study assumed no interactions, but tested for them for the possible generation of future hypotheses.

It can be seen from the above models that each F-ratio is a statistic which compares one (full or unrestricted) model to another (restricted) model which is lacking one of the predictor or interacting predictor variables. For example, the question simply asked by the models guiding F-ratio Number Seven which omits sex vectors in the restricted model is: "Does knowing whether a pupil is a boy or a girl help one in predicting criterion scores (e.g., introversion, et cetera)

significantly better than the prediction of the criterion scores not having knowledge of pupil's sex?"

The actual F-ratio essentially tests the ratio of the difference in the size of the error sum of squares of the unrestricted (e_u^2) and the restricted (e_r^2) models. Thus the null hypothesis is expressed as:

$$H_0: (e_u)^2 = (e_r)^2$$

and the F-ratio statistic is calculated as:

$$F = \frac{R_u^2 - R_r^2 / df_1}{(1 - R_u^2) / df_2}$$

where R_u^2 is the squared multiple correlation from unrestricted (full) model

R_r^2 is the squared multiple correlation from restricted model

$df_1 = P_1 - P_2$

$df_2 = n - P_1$

P_1 is the number of linearly independent predictors in unrestricted model

P_2 is the number of linearly independent predictors in restricted model

n is the total number of elements in the vector (number of cases).

The test of nonlinearity of the criterion-achievement or criterion-SES was made by forcing linearity on the relationship by simply defining the categorical achievement variables as "one" if the individual was in the lower achievement group, "two" if the individual was in the middle achievement group, and "three" if the individual was in the upper achievement group. F-ratios were then calculated with the regular Model number six as the full model and with the restricted model being Model number six modified with the categorical achievement

vectors replaced by vectors generated by the above method. The differences between the error sum of squares of the two models thus indicated the variation from linearity.

Using "Alienation" Factor score measure I as the criterion variable to test Hypothesis Number 6.

Full Model: $k + A + B + C + e$ (Model 6)

Restricted Model: $k + A + B + e$ (Model 7)

Null Hypothesis: Factor score measure I is not a function of SES level.

$\alpha = .05$ $df = 2,365$ for numerator and denominator respectively

If $F_{\text{observed}} \geq F_{\text{critical}}$, there is not a differential alienation in respect to SES.

Therefore, knowledge of SES is not significantly helpful in predicting alienation.

Using "Alienation" Factor score measure I as the criterion variable to test Hypothesis Number 4.

Full Model: $k + A + B + C + e$ (Model 6)

Restricted Model: $k + B + C + e$ (Model 9)

Null Hypothesis: Factor score measure I is not a function of sex.

$\alpha = .05$ $df = 1,365$ for numerator and denominator respectively

If $F_{\text{observed}} \geq F_{\text{critical}}$, there is no differential alienation measure score I in respect to sex.

Therefore, knowledge of sex is not significantly helpful in predicting alienation.

Using "Alienation" Factor score measure I as the criterion variable to test Hypothesis Number 2. Check for significant achievement main effect through F-ratio₆.

Using the other "Alienation" scores as the criterion variable to test Hypotheses Numbers 6, 4, and 2. Same procedure as used above with "Alienation" Factor score I.

Using Introversion as the criterion variable to test Hypothesis Number 5. Same procedure as used above with "Alienation" scores.

Using "Alienation" measure as the criterion variable to test Hypothesis Number 6. Check for significant SES main effect through F-ratio₅.

Test of Hypothesis Number Three

Hypothesis Number 3 was tested by means of significance of Pearsonian correlation coefficients.

Since sex was found to be a significant variable in the test of hypothesis 4, besides a correlation matrix using totals, separate correlation matrices for boys and girls were calculated. Also, since level of SES was found to be a significant variable in the test of hypothesis 6, the correlation matrices were broken down further for Upper, Middle, and Lower SES.

Such correlation coefficients assume that the fitting of two straight regression lines to the data does not distort or conceal the functional relation between the two variables. That is, it is assumed

that the linear-regression model is a good fit to the data. This assumption was checked by the inspection of scatter diagrams and by statistical tests of non-linearity within the Multiple Linear Regression Analyses.

RELIABILITY AND VALIDITY CHECKS ON ALUSTAP QUESTIONNAIRE

The Alustap Questionnaire was administered twice with a one week interval to 55 students and Pearsonian correlations were calculated. The test-retest correlations of the various individual scales making up the Alustap Questionnaire are reported in Table IV. Such correlations reflect the degree of response variation by the subjects from one occasion to the next.

The reader will note that the obtained correlation of .845 of Eysenck's Extraversion scale appears to be in line with the Eysencks' report of "quite satisfactory (reliabilities) running between .80 and .97" (EPI Manual, 1963). Indeed, as found in the present study the test-retest reliabilities of both Eysenck's Extraversion and Dean's Alienation scales are in line with those reported in the Appendices of the present thesis. However, the rather low reliabilities found for the Srole and McClosky-Schaar scales, considering the very short time lapse between the test and retest, cast a note of caution to the investigator making use of these scales.

TABLE IV
TEST-RETEST PEARSONIAN CORRELATIONS OF SCALES WITHIN
THE ALUSTAP QUESTIONNAIRE (TIME LAPSE OF ONE WEEK)

N = 55

SCALES	NO. OF ITEMS	CORRELATIONS
Eysenck Lie	9	.696
Eysenck Extraversion	24	.845
Eysenck Neuroticism	24	.855
Dean Normlessness	6	.727
Powerlessness	9	.751
Social Isolation	9	.766
Total	24	.856
Srole	5	.603
McClosky-Schaar	9	.654
Thorne	18	.646

In addition to the check on the test-retest reliability of the scales used in the present study, an attempt was made at validating the Thorne Humanistic Identification scale and the other "alienation" scales by providing teachers with four descriptive paragraphs of individuals displaying what the present writer judged from current literature as: Pupil A, with high "Social Interest" (Thorne developed his scale to measure Alfred Adler's concept of "Social Interest", a concept postulated to be inversely related to "alienation"); Pupil B,

with low "Social Interest"; Pupil X, as being "alienated"; and Pupil Y, as being the opposite of "alienated". The teachers were requested to list those pupils who fitted the appropriate extreme descriptions. The teachers nominated 80 pupils either Pupil A or B, and 48 pupils with Pupil X or Y. The subscales of the completed Alustap questionnaires of the pupils thus nominated were subjected to correlational analyses, the results of which are reported in Table V.

Table V indicates that the teachers' ratings in respect to paragraph descriptions of alienated and unalienated individuals are statistically significantly related to scores on the Srole, McClosky-Schaar, and Thorne scales. Teachers' ratings of pupils exhibiting extremes of "social interest" related significantly with scores on Dean's Normlessness subscale and McClosky-Schaar's and Thorne's scales.

TABLE V

CORRELATIONS USING TEACHERS' RATINGS AND MEASURES OF "ALIENATION"

MEASURES OF "ALIENATION"	TEACHERS' RATINGS	
	High "Alienation" N = 48	High "Social Interest" N = 80
Dean's Normlessness	.180 ¹	-.251*
Powerlessness	.068	-.107
Social Isolation	-.082	+.038
Total	.055	-.113
Srole's Anomia	.270*	-.169
McClosky-Schaar's Anomy	.310*	-.186*
Thorne	-.256*	+.218*

*Significant at the .05 level (one-tailed)

¹Pearsonian correlations

Thus partial support had been obtained as to the construct validity of the scales using the above method.

The preliminary findings of the Alustap Questionnaire are reported in Table VI.

TABLE VI
PRELIMINARY FINDINGS--MEANS AND STANDARD DEVIATIONS
OF ALUSTAP QUESTIONNAIRE

SUBSCALES	BOYS N = 192		GIRLS N = 179		COMBINED N = 371	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
A. EPI Intro-Extra Sc.	13.22	3.58	13.81	3.67	13.51	3.64
B. EPI Neuroticism Sc.	11.31	4.51	13.45	4.40	12.34	4.58
Dean's Alien. Sc.						
C. Normlessness	18.38	4.29	17.93	4.22	18.16	4.26
D. Powerlessness	27.47	5.91	26.75	5.47	27.12	5.71
E. Soc. Isolation	27.17	4.89	27.85	4.75	27.50	4.83
F. Total	162.15	11.53	161.85	10.98	162.01	11.27
G. Srole's Anomia Sc.	2.25	1.48	1.92	1.42	2.09	1.45
H. McClosky-Schaar A. S.	4.36	2.09	4.68	2.14	4.51	2.12
I. Thorne's Human. Iden. Scale	11.92	2.62	13.09	2.34	12.48	2.56
J. Pineo-Porter Occ. Prestige Scale	40.59	15.85	42.34	14.91	41.41	15.43
SCAT						
K. Verbal (sta.)	5.28	.93	5.15	.91	5.22	.92
L. Quant. (sta.)	5.30	1.08	5.23	1.16	5.27	1.12
M. Total (3-file)	57.38	9.05	55.60	8.78	56.52	8.96
Ach. Scores (sta.)						
N. Aggregate	5.26	1.11	5.45	.97	5.35	1.05
O. Reading	5.17	1.38	5.61	1.26	5.38	1.34
P. Literature	4.98	1.28	5.79	1.26	5.37	1.34
Q. Language	4.77	1.43	5.69	1.17	5.22	1.39
R. Social Studies	5.46	1.14	5.21	1.34	5.34	1.24
S. Mathematics	5.40	1.48	5.38	1.30	5.39	1.39
T. Science	5.64	1.43	5.12	1.26	5.38	1.38
U. Age	15.64	.75	15.31	.60	15.48	.70
V. Years in School	10.11	.49	9.96	.39	10.04	.45

CHAPTER V: RESULTS AND DISCUSSION

The results obtained are reported in two sections. The first section deals with the results of the factor analysis of the items of the various scales and the obtaining of factor score measures of "alienation". The second section deals with the results of the statistical tests of the previously-stated hypotheses. Preliminary findings are reported in Appendix I.

OBTAINING "ALIENATION" FACTORS

Preliminary factor analyses of the 57 pooled items of the Dean, Srole, McClosky-Schaar, and Thorne scales brought out eighteen factors with eigenvalues greater than one. It was observed that the items from Thorne's Humanistic Identification scale scattered across the eighteen factors without much grouping and with low factor loadings. In fact, when four factors were called out using the 57 items, only three of Thorne's items had factor loadings of 0.500 or greater. The decision was thus made to drop Thorne's items from the factor analysis and deal only with the remaining 38 items of the Dean, Srole, and McClosky-Schaar scales.

Factor analysis of these remaining 38 items resulted in nine factors with eigenvalues greater than one (Kaiser's, 1965, criterion). Of these nine factors, only three accounted for more than five per cent of the total variance. It was decided to call out four factors (the three factors accounting for more than five per cent of total variance plus an extra factor). It is from these four factors

(orthogonally rotated) that factor scores were obtained (cf. supra, p. 39) for use as criterion variables in the Multiple Linear Regression Analyses.

Intercorrelation matrices upon which the above factor analyses were performed are presented in Appendix H.

Table VII shows the loadings on the unrotated principal axes factors, the loadings on the varimax (orthogonal) rotated factors, coefficients of varimax rotated factors, and the proportion of the total variance accounted for by each of the four factors.

Factor I was named "Feeling of Personal Powerlessness". The items loading heavily on this Factor appear to reflect an individual who feels that he has no control over his present or future personal and social life. These items seem to reflect Fromm's (1955) description of the alienated individual:

He does not experience himself as the center of his world, as the creator of his own acts--but his acts and their consequences have become his masters (p. 120).

The items also seem to fit Seeman's (1959) "powerlessness" category of alienation (cf. supra, p. 10)

. . . the expectancy or probability held by the individual that his own behavior cannot determine the occurrence of the outcome, or reinforcements, he seeks (p. 784).

However, along with the feeling of powerlessness there appears to also be an element of negativism, cynicism and distrust that could possibly be interpreted as despair--as Nettler (1957) and Meier and Bell (1959) interpreted the Srole items which load moderately on this factor. Although the present writer appreciates that a "despair" label

TABLE VII

FACTOR PATTERNS FROM FACTOR ANALYSIS OF THE ITEMS OF
DEAN, SROLE, AND McCLOSKY-SCHAAR SCALES

Items as numbered in Appendices A, B, & D		Unrotated Princ. Axes 1st Factor Loadings	Varimax Orthogonal Factor Loadings				h ²
		I	I	II	III	IV	
McClosky- Schaar Anomy Scale Items	3			.67			.46
	4			.71			.54
	7			.71			.52
	1			.76			.62
	5			.62			.40
	9			.74			.56
	2	.36			.32	.38	.26
	6	.40					.21
	8			.39		.32	.31
Srole's Anomia Scale Items	10	.40	.34			.39	.35
	4	.45	.39	.38			.39
	2		.44				.24
	8	.37	.33				.29
	6		.42				.24
	4	.37			.36		.24
Dean's Norm. Subscale Items	19	.42	.53				.34
	12	.52			.65		.44
	10	.43	.43				.29
	7	.68	.50		.47		.49
	16	.64	.58		.31		.46
	6	.45			.42		.25
	18	.42	.60				.40
Dean's Powerlessness Subscale Items	2	.43			.60		.37
	9	.48			.51		.30
	21	.58	.51				.38
	13	.34	.31				.16
	15	.54			.64		.46
	23	.55	.43		.34		.34
	20	.61	.60				.45
	11					.47	.28
Dean's Social Isolation Subscale Items	3	.39					.15
	14	.41				.64	.45
	22	.32				.68	.49
	17	.64	.59			.30	.50
	8				.31	.49	.48
	24	.44		.45			.28
	1	.55		.63			.45
5		-.35	.43		-.42	.44	
Proportion of Total Variance		.17	.11	.10	.10	.07	.38

NOTE: Loadings and coefficients between +.30 and -.30 have been omitted.

could be attached to this factor, it would seem that the more prevalent theme of the items loading heavily on the factor would be that of feeling that an individual's situation in life is more the result of externals such as fate, luck, chance than the result of an individual's own wishes and strivings (a la Rotter's internal control versus external control of reinforcements, 1966). As such, this Factor I reflects the present writer's view of alienation more so than any of the other factors or scales of "alienation" used in the present study.

Parenthetically, "alienation" enclosed in quotation marks throughout the present study operationally refers to all of the factor measures and scales being used as measures of "alienation" (e.g., Factor measures I, II, III, IV, Dean's Alienation measures, Srole's Anomia measures, McClosky-Schaar's measure, and Thorne's Humanistic Identification measure. On all of the measures, except for Thorne's, a high score indicates high "alienation").

Factor II was identified as "Normlessness Resulting in Insecurity". Six of the nine McClosky-Schaar items consistently and separately loaded on a single factor in all of the factor analyses performed on the present data. McClosky and Schaar (1965) conceptualized anomy as

. . . a state of mind, a cluster of attitudes, beliefs, and feelings in the minds of individuals. Specifically, it is the feeling that the world and oneself are adrift, wandering, lacking in clear rules and stable moorings.

It would appear that these six McClosky-Schaar items measure something quite different from the other items used in the factor analyses which attests to the unidimensionality of these items. Besides these six

items, the only other two items with loadings over 0.300 were another McClosky-Schaar item plus an item from Srole's Anomia Scale.

Factor III was named "Aloneness". The items seem to depict a frightened individual who feels unable to cope with the world as it is. This factor, more so than Factor I, seems to approach Nettler's (1957) and Meier and Bell's (1959) "despair".

Factor IV was named "Friendship Status". Four of the items having the highest loadings on Factor IV are from Dean's Social Isolation subscale, which was defined by Dean (1960) as measuring "the perception of losing effective contact with significant and supporting groups". Hobart (1965) has suggested that a key dimension of alienation as variously identified by others "is the desperate feeling of not being able to communicate with others" and Hobart has traced the process of alienation through three interactionally related stages: from a feeling rightly or wrongly on the part of the individual that others "don't understand"; to a resulting impairment of ability to communicate with others; to a deepening sense of social isolation. It is this factor which seems to superficially most approximate Adler's concept of "social interest"--the feeling of belonging on this planet earth.

An interesting development arising from the preliminary analyses of the items of the Alustap Questionnaire arose when the items of Dean's, Srole's, McClosky-Schaar's, Thorne's and Eysenck's scales were subjected to factor analyses resulting in more than twenty-five factors with eigenvalues greater than one. When twenty-five factors

were called out for inspection of the factor loadings, Eysenck's items, rather than grouping as expected, scattered among all of the twenty-five factors.

Another noteworthy finding was the rather low proportion of the total variance accounted for by the first factor derived from the unrotated principal axes method. Such a low loading, although consistent with many other studies in the area of personality research, argues against the generality of the construct of "alienation"--at least as measured by the instruments and sample used in the present study. Once again, the rather low obtained test-retest reliabilities may also indirectly contribute to the low loadings.

Factor scores for each individual for use in the Multiple Linear Regression analysis were obtained by means of the method previously explained (cf. supra, p. 38).

STATISTICAL TESTS OF THE HYPOTHESES

Hypothesis 1. Introversion and Academic Achievement

A statistically significant positive relation exists between introversion and academic achievement (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

Table VIII indicates that there is a significant (beyond the .001 level) aggregate achievement-introversion positive linear relation. Thus Hypothesis 1 was not rejected.

Viewing the linear correlation between introversion and aggregate academic achievement, without control for sex or SES, a significant (at the .05 level; one-tailed) positive relationship was found ($r = 0.173$; $N = 371$).

TABLE VIII
SUMMARY OF RESULTS OF MULTIPLE LINEAR REGRESSION TEST OF THE
RELATION OF INTROVERSION AND AGGREGATE ACADEMIC ACHIEVEMENT

(Hypothesis 1; $F_6 = \frac{\text{Model } 6}{\text{Model } 8}$; $df = 2,365$)

CRITERION	R_u^2	R_r^2	F	p	RAW WEIGHTS FOR ACHIEVEMENT LEVELS		
					Lower	Middle	Upper
Introversion	.0611	.0152	8.91	.000	-1.308	.000	+1.575

NOTE: The achievement weights were included in the above table and in Tables X, XVII, and XVIII to enable the reader to mentally plot the profile of the relationship and thus gain some idea of the directionality and shape of the possible relationship. For an example of the plotting of the weights, the reader is referred to Figure 1.

When correlations were computed separately for boys and girls a positive and significant relation was found with boys on the aggregate, Mathematics, and Science measures and with girls on the Language and Social Studies measures. Table IX, showing the linear correlations between both introversion and aggregate achievement and introversion and achievement subject by subject, indicates the positive relation between introversion and all measures of academic achievement. This positive trend is supported by Figure 1.

TABLE IX
CORRELATIONS BETWEEN INTROVERSION AND VARIOUS
MEASURES OF ACADEMIC ACHIEVEMENT
(N = 371)

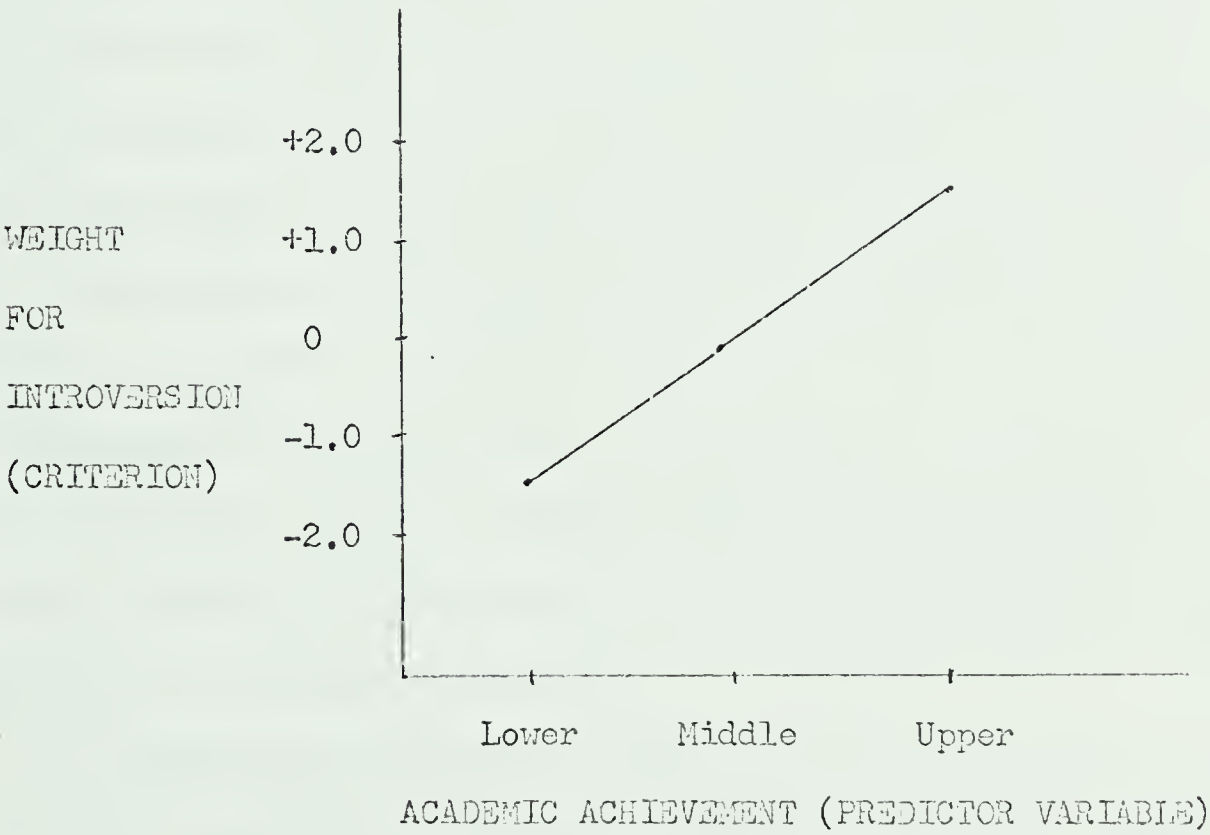
ACHIEVEMENT	INTROVERSION		
	Boys N = 192	Girls N = 179	Combined N = 371
Aggregate	.207*	.152	.173*
Reading	.065	.086	.060
Literature	.088	.116	.071
Language	.128	.211*	.126
Social Studies	.124	.173*	.156
Mathematics	.213*	.043	.135
Science	.230**	.120	.191*

* $r \geq .164$ required for significance at the .05 level (one-tailed test)

** $r \geq .230$ required for significance at the .01 level (one-tailed test)

FIGURE 1

PLOT OF WEIGHTS TO ILLUSTRATE INTROVERSION-ACHIEVEMENT RELATION



One is tempted to speculate on the significant positive relation between introversion and aggregate, Mathematics, and Science for boys and the significant positive introversion and Social Studies-Language relations for girls reported in Table IX. The greater differences between boys and girls in introversion-achievement relations seem to be among Language, Mathematics, and Science--particularly in Mathematics with which introversion for boys (but not girls) correlated significantly and where the preliminary findings of Table VI report similar mean Mathematics scores both for boys and for girls, 5.40 and 5.38 respectively. One could then ask, "Why is it that the more introverted boy generally does better in Mathematics than the more introverted girl?--or, more directly related to the present data, "Why is achievement in Mathematics related to introversion among boys but not among girls?" However, a simple test of the significance of the differences between correlation coefficients for independent samples (Ferguson, 1959, pp. 153-154) indicated that the correlations obtained separately for boys and girls did not differ significantly within any of the academic subjects.

An interesting additional finding arising from the test of nonlinearity was that the linear fit is not the best fit to describe the relation between introversion and aggregate achievement ($p = 0.037$).

Hypothesis 2. "Alienation" and Academic Achievement

A statistically significant negative linear relation exists between "alienation" measures and academic achievement, (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

Table X shows that no statistically significant "alienation"-aggregate academic achievement linear relations were found when sex and SES were statistically controlled. In the tests for nonlinearity, Factor score measure II was seen to be nonlinearly related to aggregate achievement ($p = .047$). Srole's measure approached a nonlinear relation with aggregate achievement ($p = .061$), whereas the other measures did not exhibit significant nonlinear relationships (See Table XI). Thus Hypothesis 2 was rejected.

Such a lack of relation between "alienation" and aggregate achievement may confirm the speculation of Hamsher, Geller, and Rotter (1968) who have stated:

Previous investigators (e.g., Seeman, 1963) established a relationship between I-E scores [Internal-External] and acquisition of information directly related to an individual's own life, while memory for general information was not different for groups equal in general intellectual ability. It may be that Is do not tend to acquire more information than Es unless there is a greater personal immediacy (p. 214).

Table XII shows the correlations between "alienation" measures and the various academic subjects without control for sex or SES. The reader will note that Factor score measure I is the only measure showing a significant relation (with Literature $r = -.227$, $0.025 > p > 0.01$, one-tailed, and Language $r = -.181$, $0.05 > p > 0.025$, one-tailed).

TABLE X
SUMMARY OF RESULTS OF MULTIPLE LINEAR REGRESSION TEST OF
THE RELATION OF "ALIENATION" MEASURES
AND AGGREGATE ACADEMIC ACHIEVEMENT

(Hypothesis 2; $F_6 = \frac{\text{Model 6}}{\text{Model 8}}$ df = 2,365)

CRITERION	R_u^2	R_r^2	F	P	RAW WEIGHTS FOR ACHIEVEMENT LEVELS		
					LOWER	MIDDLE	UPPER
Factor Score I	.1273	.1218	1.1632	.314	.202	1.494	-1.528
II	.0230	.0076	2.8773	.058	3.230	.000	.678
III	.0829	.0755	1.4746	.230	-2.186	.000	.000
IV	.0170	.0064	1.9681	.141	-1.796	.000	1.965
Dean's Norm.	.0183	.0177	.1224	.885	- .051	.222	.049
Power.	.0134	.0045	1.6315	.197	.000	1.106	- .193
Soc. Iso.	.0213	.0118	1.7816	.170	- .619	.000	1.154
Total	.0091	.0056	.6437	.526	-1.256	.541	.000
Srole	.0288	.0195	1.7587	.174	- .015	.000	.020
McClosky-Schaar	.0097	.0090	.1317	.877	.000	.000	- .180
Thorne	.0591	.0562	.5648	.569	- .035	.000	- .453

NOTE: The accepted level of significance for the present study is $P \leq .05$.

TABLE XI
RESULTS OF TESTS OF NONLINEARITY OF CRITERIA--AGGREGATE
ACHIEVEMENT RELATIONS WITH CONTROL OF SEX AND SES

(N = 371; df = 1,365)

CRITERION	R_u^2	R_r^2	F	P	RAW WEIGHTS FOR ACHIEVEMENT LEVELS		
					LOWER	MIDDLE	UPPER
Factor I	.1273	.1254	0.82	.366	0.202	0.747	-0.176
II	.0230	.0124	3.96	.047	3.230	0.000	0.202
III	.0829	.0790	1.54	.216	-2.186	0.000	0.000
IV	.0170	.0144	0.97	.324	-1.796	0.000	0.655
Dean Total	.0091	.0057	1.26	.262	-1.256	0.270	0.000
Srole	.0288	.0195	3.52	.061	-0.015	0.000	0.147
McClosky-Schaar	.0097	.0090	0.26	.608	0.000	0.000	-0.060
Thorne	.0591	.0569	0.87	.352	-0.035	0.000	-0.151
Extraversion	.0611	.0498	4.36	.037	1.308	0.000	-0.525

NOTE: The accepted level of significance for the present study is $p \leq .05$.

TABLE XII
CORRELATIONS BETWEEN "ALIENATION" MEASURES AND ACHIEVEMENT
IN THE VARIOUS ACADEMIC SUBJECTS

N = 371

"ALIENATION" MEASURES.	ACADEMIC ACHIEVEMENT						
	Agg	Read	Lit	Lang	SS	Math	Sc
Factor I	-.100	-.126	-.227	-.181	-.043	.004	.017
II	-.061	-.048	-.056	.021	-.066	-.023	-.111
III	.083	.100	.065	.158	-.020	-.021	-.053
IV	.082	.050	.006	.077	.092	-.039	.106
Dean's Normlessness	-.024	-.055	-.115	.016	-.036	.027	-.056
Powerlessness	-.030	-.048	-.089	.004	-.029	-.076	-.046
Soc. Isola.	.082	.035	.017	.090	.016	.048	.076
Total	.000	-.031	-.073	.049	-.032	-.007	-.021
Srole	-.017	-.067	-.119	-.027	-.024	.026	.008
McClosky-Schaar	.001	-.024	-.044	.045	-.024	-.041	-.065
Thorne	.046	.053	.054	.062	-.004	.021	-.053

$r \geq .164$ required for significance at the .05 level (one-tailed).
 $r \geq .230$ required for significance at the .01 level (one-tailed).

When correlations were computed separately for boys and girls (Tables XIV and XV), comparing aggregate achievement and achievement in the various academic subjects with the measures of "alienation", girls were found to have generally higher correlation coefficients than boys, with girls showing significant relations in Aggregate-Factor score measure I ($r = -.167$; $p < .05$, one-tailed), Literature-Factor score measure I ($r = -.224$; $0.025 > p > 0.01$; one-tailed), Social Studies-Factor score measure II ($r = -.174$; $0.05 > p > 0.025$; one-tailed), Social Studies-Factor score measure IV ($r = .168$; $p < .05$; one-tailed), and Mathematics-Dean powerlessness ($r = -.191$; $0.05 > p > 0.025$; one-tailed). The relationships shown, except for Social Studies-Factor IV, are all in a negative direction as predicted. It is interesting to note that the only significant Mathematics-"Alienation" was found among girls rather than among boys as it would have been expected from the findings of Keimowitz and Ansbacher (1960).

Also the lack of significant "alienation"-aggregate achievement relation with control for sex and SES and the significant relationships found among girls but not among boys, is both contrary to the findings of Bryde (1965) and indicative of the soundness of the speculation of Keimowitz and Ansbacher (1960) that sex differences would be an important variable to study. Table XIII has been included in order that the reader may observe in comparison with Tables XIV and XV the loss of information when correlations are calculated with boys and girls combined.

Additionally, the finding of some positive relations between some "alienation" measures and achievement casts grave doubts on the advisability of making statements concerning behavioral correlates (e.g.,

academic achievement) and the general alienation syndrome. That is, the type of alienation appears important for the prediction of the direction of the relation. The reader will particularly note the low positive relations of achievement in the various subjects to Factor score III, Factor score IV, and Dean's Social Isolation subscale score (Table XII). Such a trend would indicate that those individuals who state dissatisfaction with their friendship status and report feelings of aloneness tend to achieve higher grades than those individuals who report less concern with such matters. In this connection, Dabrowski's (1964) theory of positive disintegration comes to mind. However, viewing alienation more as a feeling of powerlessness (e.g., Factor score I), there appears to be a negative relation to achievement.

TABLE XIII
SIGNIFICANT CORRELATIONS BETWEEN ACHIEVEMENT IN THE VARIOUS
ACADEMIC SUBJECTS AND MEASURES OF "ALIENATION" AMONG
VARIOUS LEVELS OF SES--COMBINED BOYS AND GIRLS

"ALIENATION" MEASURES	ACHIEVEMENT			
	Upper SES Group N = 80	Middle SES Group N = 141	Lower SES Group N = 150	Total N = 371
Factor I	Lit -.199* Lang -.218*	Lit -.210* Lang -.197*	Lit -.235**	Lit -.227* Lang -.181*
II			Lit -.176*	
III	Read .303** Sci -.212*	Agg .283** Lang .207* SS .192*		
IV		SS .190*	Lang .181*	
Dean's Norm.			Lit -.186*	
Power.	Sci -.210*			
S.I.		Agg .222*		
Total	Sci -.219*			
Srole				
McClosky-Sch.	Math -.218* Sci -.305**			
Thorne				

*Significant at the .05 level (one-tailed)

**Significant at the .01 level (one-tailed)

TABLE XIV
SIGNIFICANT CORRELATIONS BETWEEN ACHIEVEMENT IN THE VARIOUS
ACADEMIC SUBJECTS AND MEASURES OF "ALIENATION" AMONG
VARIOUS LEVELS OF SES--BOYS

"ALIENATION" MEASURES	ACHIEVEMENT			
	Upper SES Group N = 43	Middle SES Group N = 63	Lower SES Group N = 86	Total N = 192
Factor I				
II	Read -.265* Math .274*			
III	Read .336*	Math .218*	Lang .205*	
IV				
Dean's Norm.		Math .215*		
Power.			Lang .183*	
S.I.		Agg .238* Math .253*		
Total			Lang .203*	
Srole			Agg .182*	
McClosky-Sch.	Agg -.253*			
Thorne				

*Significant at the .05 level (one-tailed)
**Significant at the .01 level (one-tailed)

TABLE XV
SIGNIFICANT CORRELATIONS BETWEEN ACHIEVEMENT IN THE VARIOUS
ACADEMIC SUBJECTS AND MEASURES OF "ALIENATION" AMONG
VARIOUS LEVELS OF SES---GIRLS

"ALIENATION" MEASURES	ACHIEVEMENT			
	Upper SES Group N = 37	Middle SES Group N = 78	Lower SES Group N = 64	Total N = 179
Factor I	Agg -.276* SS -.304* Math -.319*		Agg -.243* Lit -.346** Lang -.270*	Agg -.167* Lit -.224*
II	Read .394** Math -.310* Sci -.262	SS -.202	Lit -.395 Lang -.232*	SS -.174*
III	Sci -.322*	Agg .396** Lang .231* SS .318** Sci .285**	Lit -.301** Lang -.269*	
IV		Agg .260** SS .246*	Lit .222* Lang .325**	SS .168*
Dean's Norm.	Agg -.383** SS -.272* Math -.322* Sci -.458**		Lit -.379** Lang -.251*	
Power.	Read .282* Math -.329*	Lang .186*	Agg -.315** Lit -.334** Lang -.323**	Math -.191*
S.I.	Agg -.299* Lang -.324*	Agg .216*		
Total	Agg -.328* Math -.365** Sci -.341*	Agg .197*	Agg -.217* Lit -.337** Lang -.242*	
Srole			Lit -.291** Lang -.203*	
McClosky-Sch.	Read .363* Math -.318* Sci -.356*	Agg .244*	Lit -.362**	
Thorne				

*Significant at the .05 level (one-tailed)

**Significant at the .01 level (one-tailed)

Tables XIV and XV also give a further breakdown of the group into boys and girls among the three levels of socio-economic status and among the various academic subjects. The reader will note the general negative correlations as hypothesized. Also, Factor I has all negative relations and as such lends support to the present hypothesis.

Nevertheless the finding of some significant positive relations among the various subjects when viewed separately in the three levels of SES tends to cast some ticklish doubt on the writer's hypothesis using directionality and the consequent use of the more powerful one-tailed test as opposed to a two-tailed test.

The reader will note among the girls, with whom alienation and achievement are more predictive (cf. infra, p. 85), that the positive relations appear to be grouped primarily within the middle level of SES. Such a grouping would indicate that high "alienation" among girls is associated with low achievement among the lower and upper SES groups but that the opposite relation holds with the middle SES group. It is to be kept in mind that the relatively low test-retest reliabilities of the measures used in the present study mitigates against the making of definite statements or conclusions which may be the product of merely spurious results. On the other hand, although we are dealing with a post factum observation, the large N employed in the present study tends to decrease the probability of obtaining significant relations when non-significant relationships are actually the fact.

Hypothesis 3. Alienation and Introversion

Statistically significant positive correlations exist between introversion and "alienation" measures.

Table XVI shows the correlations between introversion and the various "alienation" measures. It can be seen that Factor score measure IV ($p < .05$; one-tailed), Dean's Social Isolation ($p < .05$; one-tailed), and Thorne's ($p < .01$; one-tailed) scales correlated statistically significantly with introversion (when correlations were calculated with boys and girls combined without control for SES or achievement). Correlations calculated separately for boys and girls did not result in a loss of significance but did result in girls Factor IV and boys Dean's Social Isolation becoming more significant.

Therefore, Hypothesis 3 was partially rejected.

The low non-significant correlation of introversion with Factor I casts doubt as to solid confirmation of the relation between introversion and alienation as defined in the context of "powerlessness" or "external vs. internal control" by the present writer (cf. supra, p. 22). The significant relations which were found with Factor IV ("Friendship Status"), Dean's Social Isolation, and Thorne's Humanistic Identification appear to point out the social element in Eysenck's introversion. Thus Hobart's (1965) conception of alienation might relate significantly to Eysenck's measure of introversion.

TABLE XVI
CORRELATIONS BETWEEN INTROVERSION AND "ALIENATION" MEASURES

"ALIENATION" MEASURES	INTROVERSION		
	Boys N = 192	Girls N = 179	Combined N = 371
Factor I	.079	.102	.111
II	-.078	-.060	-.075
III	.102	-.037	.005
IV	.174*	.281**	.229*
Dean's Normlessness	.071	-.113	-.014
Powerlessness	.072	.115	.097
Social Isolation	.260**	.178*	.214*
Total	.155	.069	.122
Srole	.152	.038	.105
McClosky-Schaar	-.013	.077	.025
Thorne	-.309**	-.371**	-.346**

* $r \geq .164$ required for significance at the .05 level (one-tailed)

** $r \geq .230$ required for significance at the .01 level (one-tailed)

Hypothesis 4. "Alienation" and Sex

No statistically significant sex differences exist in respect to "alienation" measures.

Table XVII reports statistically significant sex differences in respect to Factor score measure I, Factor score measure III, Srole's Anomia scale, and Thorne's Humanistic Identification scale. Both Factor score measure II ($p = .123$) and Dean's Social Isolation ($p = .081$) approach statistical significance. Thus, Hypothesis 4 was partially rejected. The sex weights given in Table XVII indicates that boys have higher Factor I and Srole scores than girls and that the opposite holds true with Factor III and Thorne scores. Thus, girls have significantly higher "alienation" scores than boys only in regard to Factor III.

Referring back to Tables XIV and XV the reader will note that more significant achievement-"alienation" correlations occur among girls than among boys at various levels of SES. That is, in the present study girls' "alienation" scores tend to predict achievement better than do boys' "alienation" scores. The above finding is most interesting when one considers that in many studies the sex variable is not controlled and in those studies that do control for sex usually do so experimentally by simply using all boys in the sample.

The above finding is also interesting in that it appears to both support and counter Lefcourt's (1966b) speculation:

Perceived control, as need achievement, may be less useful for predicting females' achievement behaviors than it is for males'. More investigations including sex as a variable are necessary (p. 214).

TABLE XVII

SUMMARY OF RESULTS OF MULTIPLE LINEAR REGRESSION TEST
OF THE RELATION OF "ALIENATION" MEASURES AND SEX

(Hypothesis 4; $F_7 = \frac{\text{Model 6}}{\text{Model 9}}$; $df = 1,365$)

CRITERION	R_u^2	R_r^2	F	P	RAW WEIGHTS FOR LEVELS OF SEX	
					Boys	Girls
Factor I	.1273	.0247	42.90	.000	6.476	.000
II	.0230	.0166	2.39	.123	-1.624	.000
III	.0829	.0118	28.29	.000	-5.386	.000
IV	.0170	.0142	1.06	.303	1.066	.000
Dean's Normlessness	.0183	.0151	1.19	.275	.487	.000
Powerlessness	.0134	.0097	1.37	.243	.684	.000
Soc. Isolation	.0213	.0131	3.07	.081	-.879	.000
Total	.0091	.0086	.22	.640	.571	.000
Srole	.0288	.0148	5.26	.022	.350	.000
McClosky-Schaar	.0719	.0691	2.10	.148	-.323	.000
Thorne	.0591	.0162	16.62	.000	-1.072	.000

NOTE: The accepted level of significance is $P \leq .05$.

From another view, the significant sex differences with boys exhibiting greater feeling of personal powerlessness (Factor I), greater self-to-others distance (Srole's Anomia), less humanistic identification (Thorne's scale), and less feeling of aloneness (Factor III) than girls (although consistent with the finding of Crandall, Katkovsky, and Preston, 1962) raises the questions, "Why the difference? . . . Why is the difference in the direction indicated by the present study? . . . Why the seemingly contradictory greater self-to-others distance yet less feeling of aloneness? . . ."

Although the data of the present study does not answer such questions of causality, it would indeed be interesting to speculate on such questions.

Hypothesis 5. Introversion and Sex

No statistically significant sex difference exists in respect to introversion.

Table XVIII reports no statistically significant sex differences in respect to introversion (controlling for achievement, SES, and academic aptitude). Therefore, Hypothesis 5 was not rejected at the .05 level of significance. Such a finding is consistent with the report of Eysenck and Eysenck (1968) that items giving large sex differences were eliminated from their inventory. Viewing the raw weights reported in Table XVIII, however, it is seen that, contrary to the tendency reported by Eysenck and Eysenck (1968), girls tend to score lower than boys on introversion.

TABLE XVIII

SUMMARY OF RESULTS OF MULTIPLE LINEAR REGRESSION TEST

OF THE RELATION OF INTROVERSION AND SEX

(Hypothesis 5; $F_7 = \frac{\text{Model 6}}{\text{Model 9}}$; $df = 1,365$)

CRITERION	R_u^2	R_r^2	F	P	RAW WEIGHTS FOR LEVELS OF SEX	
					Boys	Girls
Introversion	.0611	.0546	2.54	.112	+.605	.000

Hypothesis 6: "Alienation" and Socio-economic Status

A statistically significant negative linear relation exists between socio-economic status (SES) and "alienation" measures.

The results of the Multiple Linear Regression analysis dealing with Hypothesis 6 are shown in Table XIX which indicates statistically significant negative relation of level of socio-economic status to Factor score measure I, but not in respect to the other "alienation" measures. Therefore, Hypothesis 6 is generally rejected, with the noted exception. A finding of lack of relation is inconsistent with much of the previous research done on this topic (e.g., Battle and Rotter, 1963; Dean, 1961; Franklin, 1963; McClosky and Schaar, 1965; Meier and Bell, 1959; Mizruchi, 1960; Seeman, 1962, 1963, 1966, 1967; and Srole, 1959).

Some possible explanations for this lack of expected relation are (1) the relatively limited range of SES to be found in the Edmonton area; (2) the possible lack of validity of the Pineo-Porter Canadian Occupational Prestige Scale as a measure of SES; (3) a peculiarity of

TABLE XIX

SUMMARY OF RESULTS OF MULTIPLE LINEAR REGRESSION TEST
OF "ALIENATION" MEASURES AND SOCIO-ECONOMIC STATUS

(Partial Test of Hypothesis 6; $F_5 = \frac{\text{Model 6}}{\text{Model 7}}$; df = 2,365)

CRITERION	R_u^2	R_r^2	F	P	RAW WEIGHTS FOR LEVELS OF SES		
					Lower	Middle	Upper
Factor I	.1273	.1114	3.34	.036	.000	-1.513	-3.309
II	.0230	.0209	.39	.678	-.958	.000	-.201
III	.0829	.0824	.09	.909	.439	.000	-.090
IV	.0170	.0130	.73	.484	1.237	.000	-.197
Dean's Normlessness	.0183	.0041	2.65	.072	.369	.000	-.982
Powerless.	.0134	.0122	.21	.813	.066	-.149	-.417
Soc. Isola.	.0213	.0179	.65	.524	.557	-.045	.000
Total	.0091	.0038	.98	.376	1.259	.156	-.904
Srole's	.0288	.0216	1.36	.259	.020	.000	-.290
McClosky-Schaar	.0097	.0068	.53	.589	.000	-.043	-.294
Thorne	.0591	.0505	1.66	.190	-.517	.000	-.152

the sample of Edmonton students both drawn and obtained; (4) the possibility that the controlling for the sex and achievement variables removed much of the variance which would otherwise have been attributed to SES; (5) the additive effect of combinations of the above possibilities and (6) the fact of no true relation between the two variables.

NOTE: A summary of the significant values of the F-ratios in the Multiple Linear Regression Analysis in the test of main effects and interactions has been given in Appendix I. Also, intercorrelations found among the "alienation" measures are reported in Appendix J.

CHAPTER VI: SUMMARY, CONCLUSIONS, IMPLICATIONS

SUMMARY

The interrelationships of "alienation", introversion, and academic achievement were investigated through the testing of four hypotheses. Three additional hypotheses tested the influence of sex and socio-economic status upon the above variables.

A questionnaire consisting of the randomly ordered items of Eysenck's 1968 Personality Inventory, Dean's Alienation Scale, Srole's Anomia Scale, McClosky-Schaar's Anomy Scale, plus a section devoted to demographic data was administered by the classroom teacher to all Edmonton Separate School Board Grade X pupils present in the six high schools during the second and third last weeks of the 1967-68 school year.

Academic achievement was measured by the 1967 Provincial Grade Nine Examinations. An index of socio-economic status was obtained by use of the Pineo-Porter Canadian Occupational Prestige Scale.

"Alienation" factor scores were obtained through factor analyses of items from current "alienation" scales. Such scores, along with the regularly obtained scores were used successively as the criterion variable with sex, academic achievement, and socio-economic status as the predictor variables in a Multiple Regression Analysis 360-67 computer program to test, along with additional Pearson Product Moment correlation coefficients, the major and minor hypotheses.

CONCLUSIONS

The conclusions with regard to each hypothesis are presented individually. Hypotheses 1 and 2 have been considered the major hypotheses of the present study.

Hypothesis 1. Introversion and Academic Achievement

A statistically significant positive relation exists between introversion and academic achievement (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

The Multiple Linear Regression analysis, with control for sex and SES, indicated a significant positive linear relationship ($p < .001$). Correlations calculated separately for boys and girls resulted in a significant positive relation ($r = .207$; $p < .05$; $N = 192$) among boys. Further analyses confirmed the trend of a positive relation between introversion and academic achievement.

It was concluded that a significant linear relation exists between introversion and academic achievement. An interesting additional finding was that the relationship could be even better defined in a nonlinear manner.

Hypothesis 2. "Alienation" and Academic Achievement

A statistically significant negative linear relation exists between "alienation" measures and academic achievement, (statistically controlling for sex and SES; experimentally controlling for scholastic aptitude).

The hypothesis, as stated, was rejected.

However, further analyses of the data with and without controls for sex and SES, and with a further breakdown of academic achievement

into individual academic subjects, resulted in interesting findings meriting future research. For example, girls were found to have generally more significant correlations between "alienation" measures and the various academic subjects than boys.

Hypothesis 3. "Alienation" and Introversion

Statistically significant positive correlations exist between introversion and "alienation" measures.

Only minor measures of "alienation" correlated significantly and in a positive direction with introversion. Thus, it was concluded that, essentially, there exists a lack of relation between introversion and "alienation".

Hypothesis 4. "Alienation" and Sex

No statistically significant sex differences exist in respect to "alienation" measures.

The hypothesis was partially rejected and it was concluded that there were significant sex differences in respect to two of the major measures of "alienation" (Factor I and Srole).

The tendency was for boys to have generally higher "alienation" scores than girls.

Hypothesis 5. Introversion and Sex

No statistically significant sex difference exists in respect to introversion.

It was concluded that there were no significant sex differences in respect to introversion.

Hypothesis 6. "Alienation" and Socio-economic Status

A statistically significant negative linear relation exists between socio-economic status (SES) and "alienation" measures.

The hypothesis was generally rejected with a noted exception and it was concluded that there was limited "alienation"-SES relationship.

IMPLICATIONS

The present study presents relevant implications to theory, practice, and research for both educators and social psychologists. Implications arising from the testing of the two major hypotheses concerning introversion-achievement and alienation-achievement relations will be considered first, after which implications arising from the testing of the minor hypotheses will be dealt with.

In respect to theory it would appear that the positive relation between aggregate achievement and introversion at the college level also holds true at the high school level. Thus one of the two major questions of the present thesis has been answered. However, the question still remains, "Is the present relation of introversion to academic achievement a relation to be fostered?" The present study has merely brought out a significant relation between the two measures; it is for society as a whole to determine the aims of the school in respect to the personality development of its pupils.

The second major hypothesis dealing with the alienation-

aggregate achievement relation has not been confirmed. In this regard, it would seem that aggregate achievement has been an inadequate behavioral variable with which to ascertain the effect of the individual's generalized expectancy of control. Rotter (1968) has suggested that an individual's expectancy in a given instance is a result of situational expectancy plus generalized expectancy "which varies inversely with the number of experiences with the same or similar situations" (Hamsher, Geller, and Rotter, 1968). Thus an individual's reaction to a novel as opposed to a familiar situation would be most reflective of his generalized mode of reacting. Academic achievement, with its myriad of situational influences, can by no means be considered a unique or novel situation for the student and thus a measure of generalized expectancy of control would have proportionally less effect on academic achievement scores than it has been shown to have in more novel situations. Further research into the acquisition-of-knowledge-degree-of-alienation relation would be better directed at specific information acquired in more specific situations rather than in the all-pervasive realm of global school achievement.

Another implication to be mentioned would be that research with other levels of scholastic aptitude and/or other age groups within the school system may reveal differing results. Indeed, would the exhibition of traits of introversion and/or alienation have the same consequences at various stages of development? That is, do extremes of such traits indicate less serious or more serious con-

ditions among primary grade children than among senior high school adolescents? Still another question which could be asked is, "Could alienation and/or introversion be a pathway that one must travel in one's progress toward self-fulfillment and self-actualization?" Research from a developmental view seems warranted. Such research delving into the developmental aspect could also deal with the importance of early childhood experiences in "determining" the style of life characterized by feelings of powerlessness.

A further implication arises from the negative relation found between academic achievement and Factor I ("Feeling of Personal Powerlessness") but the positive relations found between achievement and Factor IV ("Friendship Status"). Could both Factor I and IV be viewed as reflecting a loss of faith in oneself--with the Factor IV individual compensating in a "constructive" manner and the Factor I individual compensating in a "destructive" manner? If so, how can teachers and the pupil personnel services best help both types of individuals? It would seem that the implication from alienation studies would suggest that the individual must both be aided in overcoming and replacing his feeling of external control with the feeling of internal control and that he does have the ability to communicate his feelings to others.

In respect to the implications arising from the results of the testing of the minor hypotheses the theoretical position of alienation in relation to sex has by no means been resolved. The significant sex differences with boys exhibiting greater feeling of

personal powerlessness (Factor I), greater self-to-others distance (Srole's Anomia), less humanistic identification (Thorne's scale), and less feeling of aloneness (Factor III), raises the questions, "Why the difference? . . . Why is the difference in the direction indicated by the present study? . . . Why the seemingly contradictory greater self-to-others distance yet less feeling of aloneness? . . ."

Although the data of the present study does not answer such questions of causality, it would indeed be interesting to speculate on these questions. Especially interesting among the boys is the seemingly contradictory greater alienation (i.e., feeling of personal powerlessness, self-to-others distance, lack of humanistic identification) but less feeling of aloneness. An individual exhibiting such traits may fit into Hobart's (1965) schemata of the autonomous nonconforming individual who approaches the "authentic 'beat', Fromm's productive and loving person, Allport's person who is capable of becoming, Rokeach's open-minded person, and Maslow's self-actualizing person . . . Not needing to rush into compulsive nonconformity he is able to create his own uniquely individual and appropriate innovations" (p. 101). The present finding would suggest that if one were to study the current "hippy" movement he would possibly find that boys would be more autonomous non-conformist as opposed to conformist nonconforming in Hobart's (1965) sense of the terms of true "beats" and false "beats" respectively.

The indication of boys generally exhibiting higher levels of

alienation than girls but alienation among girls being more predictable from academic achievement than boys may be partially explained by the postulate that our school curricula cater more to the needs of girls than to the needs of boys. As such boys would feel less "at home" than girls in the overall high school program. Also, girls would respond more noticeably to lower achievement with more peaked alienation or, vice versa, respond to feelings of alienation with more evident lower achievement.

Interesting implications for practice arise from the data. With boys generally exhibiting higher degrees of alienation, would the teacher and counsellor find that the employment of encouragement be more useful in dealing with boys than with girls? Also, if one accepts the postulation that many clients come into counselling with the vague feeling that they are powerless to do anything about their present unpleasant situation, and if the counsellors task is thus seen as attempting to help the individual move from a position of feeling externally-controlled to a position of feeling more internally-controlled, would scales measuring internal vs. external control of reinforcements serve the practical use of aiding in the evaluation of success in counselling? In the above light, the concept of powerlessness viewed as internal-external control of reinforcement expectancies seems very similar to Alfred Adler's emphasis in therapy on the overcoming of helplessness and the development of mastery and effectiveness in the individual's control of his personal world.

Communality appeared to exist between the separate descriptions of the introverted and the alienated individual. However, limited relation was actually found between Eysenck's introversion measure and alienation as defined in the sense of feeling of powerlessness. As such, the previous research findings concerning behavioral correlates of introversion would not seem to have bearing on the future research on the behavioral correlates of powerlessness.

In respect to research, it would seem that the study of alienation may best be undertaken through initially clarifying and defining the aspect of alienation to be studied and then obtaining specific scale(s) to measure that aspect. Much work needs to be done in the development of valid and reliable scales to measure the various aspects of alienation. The generating of "new" scales through the recombination and weighting of items from other scales through factor analytic techniques would seem to have merit, e.g., the more powerful test of alienation achieved in Factor I of the present study. Apart from the use of factor analysis, an example of a promising scale to measure an aspect of alienation as defined in the present study is the Internal-External (I-E) Scale (See Rotter, 1966, pp. 11-12). Concerning the scales used in the present study, the factor analyses confirmed the unidimensionality of both Srole's and McClosky-Schaar's scales and clearly demonstrated the uniqueness of the McClosky-Schaar scale.

In conclusion, the concept of alienation appears to offer an inviting area for research with many implications for practice and theory. The present writer rather presumptuously attempted to view

one of the possible behavioral correlates of alienation. Many mistakes were made but hopefully some understanding of human behavior resulted. The extent of this understanding will be shown through the writer's use of the concepts as enrichment both in his professional and nonprofessional activities.

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A P P E N D I C E S

APPENDIX A

DEAN'S ALIENATION SCALE

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DEAN'S ALIENATION SCALE

DESCRIPTION

Dean's Alienation Scale is a 24-item scale consisting of three sub-scales, "normlessness", "powerlessness", and "social isolation", which attempt to measure the general syndromes of alienation.

SCALE ITEMS

The numbering of the items in Table VII follows that given by Bryde (1965).

RESPONSE MODE

The subject responded to each item by checking one of strongly agree, agree, undecided, disagree, or strongly disagree.

SCORING

The responses were scored from one to five, with five indicating the greatest amount of alienation. Thus items number 5, 8, 11, 14, and 22 are scored strongly agree, 1; agree, 2; undecided, 3; disagree, 4; strongly disagree, 5. The remaining items were scored with reversed weights.

VALIDITY

The 24 items of the Dean's scale used in the present study

. . . were originally included among 139 items selected as possible indicators of alienation. Validation was attempted by submitting the items with one-page descriptions of the three component types to seven sociologists at the Ohio State University. The judges were instructed to decide whether or not each of the 139 items referred specifically and only to powerlessness. They were then given a new set of cards to judge the items in regard to normlessness, and, finally, a set for judging in regard to social isolation. For retention of an item, agreement on specific placement was required from at least five of the seven judges. When this procedure had been completed, the usual "DP" test was applied to determine which of the "valid" items were to be retained (Dean, 1962).

Dean (1961) reported the following information:

Intercorrelations Among The Alienation Scale Components (N = 384)

Components	Normlessness	Social Isolation	Alienation (Total)
Powerlessness	.67	.54	.90
Normlessness		.41	.80
Social Isolation			.75

Using a more extreme group (60 white and 60 negro reformatory inmates mainly of lower class origin and within the average range of intelligence) on the alienation dimension, Lefcourt and Ladwig (1966) quite understandably reported subscale intercorrelations of lesser magnitude than Dean:

Intercorrelations Among The Alienation Scale Components (N = 120)

Components	Normlessness	Social Isolation
Powerlessness	.48**	.44**
Normlessness		.28*

*P < .05
**P < .01

Dean (1961) found the correlation coefficients between the various components of Alienation and Adorno's "F" scale (for a college sample pretest of 73 respondents) to be as follows:

Powerlessness and Authoritarianism	.37*
Normlessness and Authoritarianism	.33*
Social Isolation and Authoritarianism	.23**
Alienation and Authoritarianism	.26**

*Significant at the .05 level of confidence.
**Significant at the .01 level of confidence.

Dean (1961) hypothesized "a negative correlation between social status (as measured by a modified version of the North-Hatt Occupational Prestige Scale, the amount of education attained, and income) and Alienation and its several components". He stated that in most cases the hypotheses were statistically sustained (N = 384).

Simmons (1966), using 391 students enrolled in sociology and anthropology courses at a major midwestern university, obtained the following Pearsonian correlations:

Intercorrelations Among Measures of Alienation and Despair					
SCALES		N	P	SI	D
Dean's Scale	{ Normlessness (N)	--	.43	.33	.25
	{ Powerlessness (P)		--	.53	.35
	{ Social Isolation (SI)			--	.23
Srole's Scale	{ Despair (D)				--

$r \geq .10$ significant at the .05 level.
 $r \geq .13$ significant at the .01 level.

RELIABILITY

Dean (1961) reported reliability of the powerlessness sub-scale, using split-half technique, as being .78 ($N = 384$) when corrected by the Spearman-Brown prophecy formula. Similarly obtained reliabilities for the normlessness and social isolation sub-scales were .73 and .84, respectively. Dean (1961) stated that "The total Alienation scale had a reliability of .78 when corrected" (p. 756).

COMMENTS

Two shortcomings of Dean's scale are first, the items in the powerlessness and normlessness subscales all have the "strongly agree" response as indicating the greatest degree of alienation; second, Dean does not report standardizing the scale as to its unidimensionality (Stirling, 1964).

As a further comment, Simmons (1966) argued that the specific content of Dean's scales is "so similar that the scales are distinct in name only". Indeed, the factor analyses of the present study would tend to support Simon's argument.

One could also comment on the possible loss of randomness both with Dean's drawn sample between and within precincts, and with his obtained sample.

Seeman (1959) noted that Dean's "social isolation" measure

. . . deals with the individual's friendship status . . . this is not a very useful meaning, for two reasons. First, it comes very close to being a statement of either social adjustment or of simple differences in associational styles (i.e., some people are sociable and some are not), and as such seems irrelevant to the

root historical notion of alienation. Second, the crucial part of this "social isolation" component in alienation--what Nisbet, for example calls the "unattached" or the "isolated"--is better captured for analytical purposes, I believe, in the ideas of meaninglessness, normlessness, or isolation, as defined in expectancy or reward terms. That is to say, what remains, after sheer sociability is removed, is the kind of tenuousness of social ties that may be described as value uniqueness (isolation), deviation from approved means (normlessness), or the like (p. 739).

APPENDIX B
SROLE'S ANOMIA SCALE

APPENDIX B

SROLE'S ANOMIA SCALE

DESCRIPTION

Srole (1956) constructed five interview schedule items to measure personal anomia--a sociological-psychological concept indicating self-to-other alienation manifest by members of a group. Srole (1956) stated

. . . the immediate analytical objective would be to place individuals on an eunomia-anomia continuum representing variations in interpersonal integration with their particular social fields as "global entities". More concretely, this variable is conceived as referring to the individual's generalized, pervasive sense of "self-to-other belongingness" at one extreme compared with "self-to-others distance" and "self-to-others alienation" at the other pole of the continuum (p. 711).

SCALE ITEMS

The numbering of the items in Table VII follows that given by Mizruchi (1960, p. 647). Other sources are Miller and Butler (1966, p. 404); Neal and Rittig (1963, p. 603; 1967, p. 57); McDill (1961, p. 239); Meier and Bell (1959, p. 189); Struening and Richardson (1965, p. 672).

RESPONSE MODE

Subjects responded to each item by checking one of five alternatives: strongly agree, agree, undecided, disagree, strongly disagree.

SCORING

Following Srole's (1956) procedure, only the "Agree" responses to the Srole's scale items were scored. Thus, a score of 5 represented the extreme anomic response, while a score of 0 represented the extreme nonanomic response. (Also see Mizruchi, 1964, p. 402.)

VALIDITY

Srole (1956) described the construction of the scale in these words:

. . . we set down the ideational states or components that on theoretical grounds would represent internalized counterparts or reflections, in the individual's life situation, of conditions of social dysfunction . . .

The first of these postulated components was the individual's sense that community leaders are detached from and indifferent to his needs, reflecting severance of the interdependent bond within the social system between leaders and those they should represent and serve . . . "There's little use writing to public officials because they aren't really interested in the problems of the average man."

The second hypothesized element of anomia was the individual's perception of the social order as essentially fickle and unpredictable, i.e., orderless, inducing the sense that under such conditions he can accomplish little toward realizing future life goals . . . "Nowadays a person has to live pretty much for today and let tomorrow take care of itself."

Closely related to this aspect of anomia was a third element: the individual's view, beyond abdication of future goals, that he and people like him are retrogressing from the goals that they have already reached. The item chosen to represent this component was the statement rejecting the American Creed doctrine of progress: "In spite of what some people say, the lot of the average man is getting worse, not better".

The fourth component postulated, and the one perhaps most closely approximating Durkheim's particular definition of anomie, was the deflation or loss of internalized social norms and values,

reflected in extreme form in the individual's sense of the meaninglessness of life itself . . . "It's hardly fair to bring children into the world with the way things look for the future."

The final anomia component was hypothesized as the individual's perception that his framework of immediate personal relationships, the very rock of his social existence, was no longer predictive or supportive . . . "These days a person doesn't really know whom he can count on" (pp. 712-713).

Srole (1956) had found that anomia was inversely related to social and economic status independently of the mental disturbance factor.

Srole (1956) reported that the criteria of unidimensionality of the five items had been satisfied through the procedures of latent structure analysis. He also reported that his associate, Thomas Langner, "has established that the same five anomia items satisfy the requirements of a Guttman-type scale" (Srole, 1956, p. 712).

Also, Miller and Butler (1966) reported that the various investigators who have explicitly tested the Srole scale for unidimensionality

. . . invariably stress the unidimensional character of the items. For example, James (1963) factor analyzed responses to Srole's items and reported that they formed an independent dimension. In addition, Neal and Rettig (1963) and Streuning and Richardson (1965) included the Srole items in a large array which dealt with some theoretical dimensions of alienation. Both research teams, as a result of factor analysis, concluded that the items formed a single dimension (p. 401).

Miller and Butler (1966) themselves undertook an analysis of Srole's five items through factor analysis and Guttman scaling as a test of unidimensionality, and latent class analysis as a test of scalability and typological construction. Their analysis indicated that two polar types, anomic and eunomic, would appear to be more

appropriate than gradations of the Guttman scale type. They also concluded that Srole's items form a unidimensional set.

RELIABILITY

Using the Cornell scaling technique, Meier and Bell (1959) found the coefficient of reproducibility to be .90 and the coefficient of scalability to be .65.

Reimanis (1965) found the test-retest reliability coefficient for the Srole Anomia Scale, with an N of 61 and a two-year interval "to be .70, suggesting a moderate reliability over a relatively long time period" (Reimanis, 1965, p. 247).

COMMENTS

The Srole scale has been widely used. McClosky and Schaar (1965) have reported that "Srole's scale and Merton's typology of modes of adaptation are the two most widely used research instruments in the study of anomy".

Perhaps negatively, Middleton (1963) stated that the manifest content of Srole's scale appeared to be a combination of cynicism and pessimism, whereas Nettler (1957) and Meier and Bell (1959) maintained that the scale measured despair. In this respect, using measures of authoritarianism, anomia, and alienation, Struening and Richardson (1965) found that all five of Srole's Anomia Scale items loaded heavily on the first factor of their factor analysis, called "Alienation via Rejection". Struening and Richardson (1965) reported that this factor "contains a strong component of cynicism and distrust bordering on

suspicion" (p. 771).

Giving Srole's scale an Adlerian interpretation, Davol and Reimanis (1959) suggested that the anomia end of Srole's anomia-eunomia continuum

. . . may be interpreted as lack of social interest, using the term in the Adlerian sense (Adler, 1956). From the content of the Srole scale items, an anomic individual is seen to perceive today's society as disorganized, lacking stability, and populated with undependable and uncaring individuals and leaders. In order to survive in such a world, one must look out and strive only for oneself. Under such circumstances, an individual's potential for pursuing goals useful to society may become asocialized and the energy channelled into an anomic style of life. Again, the importance of education cannot be overlooked because it guides the early development of socially useful behavior and helps provide constant contact between the society and the individual (pp. 222-223).

APPENDIX C

EYSENCK PERSONALITY INVENTORY (EPI)--FORM A

APPENDIX C

EYSENCK PERSONALITY INVENTORY (EPI)--FORM A

The EPI is a 57-item inventory (primarily a revision of the Maudsley Personality Inventory, MPI) developed by Eysenck to measure two personality dimensions: Neuroticism (N) ("the general emotional over-responsiveness, and his liability to neurotic breakdown under stress") and Extraversion (E) ("as opposed to introversion, refers to the outgoing, uninhibited, sociable proclivities of a person").

Eysenck and Eysenck (1968) have stated:

While not wishing to deny the existence and importance of factors additional to E and N, it is held that these two factors contribute more to a description of personality than any other set of two factors in the noncognitive field (p. 13).

The N and E scales consist of 24 items each; the remaining 9 items comprise a Lie Scale which has been adapted from the MMPI. It would appear that the data to date are compatible with Eysenck's hypothesis that Neuroticism and Extraversion are orthogonal factors.

The EPI Manual (1968) has stated:

The EPI is sufficiently similar to the MPI, and correlates sufficiently highly with it, to make it almost certain that the experimental findings reported for the older instrument will also apply to the newer . . . (p. 5).

SUBJECTS

In the construction of the MPI, factor analyses and item analyses were originally carried out on a sample of 200 men and 200 women. Later samples were comprised of groups of students, industrial apprentices, nurses, and a quota sample of the whole population.

In constructing the EPI, "about a dozen further factor analytic studies were carried out" (Eysenck and Eysenck, 1968) on widely representative samples.

RESPONSE MODE

The subjects responded to each of the items by checking one of "Yes" or "No".

SCORING

Scoring is accomplished by aligning the appropriate scoring key over the completed answer sheet and counting one point for each blackened answer space showing through the holes in the key. The score for each scale is the sum of these responses. (1968 Manual, p. 5)

The EPI Manual (1968) presents American college student norms for Form A based on 1003 cases; for Form B based on 239 cases; and Form A and B combined based on 236 cases.

VALIDITY

The Heron neuroticism and sociability scales correlate .64 and .80 with the corresponding MPI scales; the Cattell neuroticism and introversion scales correlate .34 and .53 (forms A and B), and .65 and .67 (forms A and B) with the corresponding MPI scales. (These correlations were derived from 134 neurotics.) The Taylor Manifest Anxiety Scale correlates .77 with N and $-.34$ with E on 254 American students. Correlations with the Guilford C and R scales were .92 and .79 respectively in the original item analysis group of 400. Correlations with the Minnesota T.S.E. scales on 87 students and student nurses were as follows: N with T = .104; N with S = .33; N with E = .17; E with T = $-.05$; E with S = .81; E with E = $-.08$. (Taken from MPI Manual, 1962)

In respect to factorial validity, the N and E scales "invariably have high loadings on factors that are also heavily represented in

other measures considered to be indicative of neuroticism and extraversion, and there is little factorial overlap between the scales" (Jensen, 1965).

Descriptive validity "has been adequately established by the method of nominated groups (Jensen, 1965).

In respect to construct validity, Jensen (1965) stated that the psychological theory and experimentation associated with the MPI make it the preferred measures of neuroticism and extraversion. Bursill (1960), however, cautioned against "accepting the construct validity as indeed valid".

Further factorial, construct, concurrent, and nominated groups and rating validity studies are reported in the 1968 Manual.

RELIABILITY

Test-retest reliabilities, based on "two groups of normal English subjects" with 9 to 12 months time lapse, are reported to be "quite satisfactory, running between .84 and .94 for the complete test and between .80 and .97 for the separate forms" (1968 Manual).

Combined scale split-half reliabilities are reported to run from .74 to .91 (1968 Manual).

COMMENTS

Jensen (1965) stated in respect to the MPI:

Unlike some personality inventories (e.g., the MMPI), none of the items could be construed as socially objectionable; thus the inventory can be used with adolescents or adults in almost any setting (p. 289).

Also,

All in all, it seems safe to say that no other personality test is based upon a body of psychological theory so far reaching and so diligently and ably researched as is the MPI (p. 289).

Lingoes (1965) lamented the fact that:

. . . the authors explicitly invoke the similarity in respect to content and the high, but regrettably omitted, correlations between the EPI and MPI to buttress their claims for the theoretical and experimental validity of the newer test (p. 216).

The present author hopes at a future time to report on correlations between the EPI and MPI.

APPENDIX D

McCLOSKEY-SCHAAR ANOMY SCALE

APPENDIX D

McCLOSKEY-SCHAAR ANOMY SCALE

DESCRIPTION

McClosky and Schaar conceptualized anomy (attempting to restore the 17th century English spelling of the word) as

. . . a state of mind, a cluster of attitudes, beliefs and feelings in the minds of individuals. Specifically, it is the feeling that the world and oneself are adrift, wandering, lacking in clear rules and stable moorings. The anomic feels literally demoralized; for him, the norms governing behavior are weak, ambiguous, and remote. He lives in a normative "low pressure" area, a turbulent region of weak and fitful currents of moral meaning. The core of the concept is the feeling of moral emptiness (1965, p. 19).

Their 9-item Anomy Scale "was one of a set designed to measure response to the social and political community" (p. 23).

SCALE ITEMS

The numbering of the items in Table VII follows that of McClosky-Schaar (1965, p. 23).

RESPONSE MODE

The subject responded with agreement or disagreement by checking "Yes" or "No".

SCORING

The "Yes" responses were scored one, whereas the "No" responses were scored zero. The highest possible score of nine represented the greatest degree of Anomy.

VALIDITY

Through preliminary screening and pre-testing, a large pool of items was cut down to 11 items which were then submitted to a sample of 273 adults. The responses of the subjects in the sample

. . . were scrutinized for internal consistency, subjected to a Guttman reproducibility procedure, and finally reduced to the nine items . . . (McClosky and Schaar, 1965, p. 23).

Face Validity

McClosky and Schaar (1965) stated that the items in their scale "define, by their content, our conception of anomy" (p. 24). The items were also judged by graduate students and fellowship holders as to whether the items express what other students mean by "anomy".

Construct (Concurrent) Validity

McClosky and Schaar (1965) reported significant correlations beyond the .01 level (N 's of 1484 and 1082) between their scale and measures of alienation, bewilderment, pessimism, feelings of political cynicism, and life satisfaction.

Unidimensionality

McClosky and Schaar (1965) reported coefficients of reproducibility of .80 and .83 for two large samples.

RELIABILITY

". . . the split-half reliability coefficient as corrected by the Spearman-Brown formula is a satisfactory .76" (p. 24).

COMMENTS

Srole (1965) rather ruthlessly attacked McClosky and Schaar's sampling procedures both in achieved quantity and quality. Commenting on the technical faults of the McClosky and Schaar reported surveys, Srole (1965) stated that the surveys

. . . are so seriously flawed in their technical design as to challenge the generality and validity claimed for their findings and conclusions (p. 762).

Nettler (1965) commented

The validity (meaning) of their nine-item measure of Anomy remains in question. Its unidimensionality is assured, but its content is not, perhaps, what the authors think it is. Their tendency to relate Anomy to personality variables of similar content produces associations that are redundant and correlations that are spurious, the authors' protests to the contrary notwithstanding (p. 763).

Although McClosky and Schaar used their Anomy scale in a large battery of scales, it may well be a weakness that responses indicating "anomy" are all answered "No".

APPENDIX E

THORNE'S HUMANISTIC IDENTIFICATION SCALE

APPENDIX E

THORNE'S HUMANISTIC IDENTIFICATION SCALE

DESCRIPTION

The Humanistic Identification Scale consisted of 19 items relating to Adler's "Gemeinschaftsgefuehl" (social interest). It was one of the seven scales comprising The Existential Analysis, which in turn was one of the seven 200-item surveys in The Integration Level Test Series.

SCALE ITEMS

The source of the items was Thorne (1965).

RESPONSE MODE

The subject responded to each item by checking one of "Yes" or "No".

SCORING

Items number 41, 61, 62, 63, 119, 149, 163, 184, 192 were scored one for a "Yes" response; the remaining items were scored one for a "No" response. The total scores range from 0 to 19; the higher the score the greater the degree of social interest as measured by the scale.

COMMENTS

The Existential Analysis is still in the process of development and has not yet been standardized. However, it is the hope of the present writer that the items in The Humanistic Identification Scale, a subscale of The Existential Analysis, will contribute to the pool of "alienation" items to be factor analyzed in the present study.

The writer has conducted a small-scale analysis of the construct validity of The Humanistic Identification Scale. The results of the analysis are reported in the section "Reliability and Validity Checks on Alustap Questionnaire" of Chapter IV.

APPENDIX F

PINEO-PORTER CANADIAN OCCUPATIONAL PRESTIGE SCALE

APPENDIX F

PINEO-PORTER CANADIAN OCCUPATIONAL PRESTIGE SCALE

Basing their design primarily on the 1947 National Opinion Research Centre (NORC) studies, Pineo and Porter had all 793 (64.3% of drawn sample) of their respondents rank 174 occupational titles and had sub-samples of respondents rank 72 industries and corporations, 36 ethnicities, and 21 religions. From these rankings, Pineo and Porter obtained scores (transformations of the mean with a range from 0 to 100) within eight socio-economic groups (plus a separate group for farmers).

Pineo and Porter (1967) have reported

In over twenty occupations in common with Tuckman's study our scores correlated .93 with his. In a study by Robson a sample of Canadian undergraduates ranked some of the original NORC titles. These ratings and ours over 31 matching titles produced a correlation of .96. With Blishen's scale based on the 1951 census our ratings correlate .93 when the comparison is restricted to 57 very closely matching titles and .88 when the comparison includes another 73 titles which are relatively poor matches. These correlations may be compared to the multiple correlation of income and education on prestige of .91 found by Duncan in the U.S. (p. 32).

Pineo and Porter (1967) reported a high level of correlation ($r = .94$) between the measure of occupational rank as obtained from the Blishen (1953) scale and U.S. prestige scores. They also reported a high correlation ($r = .96$) between the ranking of occupations in Canada and the U.S. (p. 12).

Working in the Edmonton area, MacArthur and Elley (1963) found intercorrelation of .61 between the Blishen occupational index (1953) and the Hone Index Scale, which "consisted of twenty items, adapted

for local conditions from a scale devised by Gough (1949)".

Based on a sample of 77 Grade Nine students and using a modified version of the MacArthur and Elley (1963) Home Index Scale (A) plus ratings of occupations based both on the Blishen (1958) occupational index (B) and the Pineo-Porter Occupational Prestige Scale (C), the present writer obtained the following Pearsonian correlations.¹

SOCIO-ECONOMIC STATUS CORRELATION MATRIX--BOYS (N = 39)

SCALES	A	B	C
A. Home Index	1	0.541	0.548
B. Blishen (1958)		1	0.926
C. Pineo-Porter			1

SOCIO-ECONOMIC STATUS CORRELATION MATRIX--GIRLS (N = 38)

SCALES	A	B	C
A. Home Index	1	0.663	0.659
B. Blishen (1958)		1	0.909
C. Pineo-Porter			1

SOCIO-ECONOMIC STATUS CORRELATION MATRIX--COMBINED (N = 77)

SCALES	A	B	C
A. Home Index	1	0.593	0.591
B. Blishen (1958)		1	0.915
C. Pineo-Porter			1

It would appear that the present scale is adequate for the measuring of SES.

¹The writer is indebted to Miss Linda Ereiser for her assistance in the scoring of the Blishen and Pineo-Porter scales.

APPENDIX G

DATA-COLLECTING INSTRUMENTS

Letter to Classroom Teacher

Directions for Administering Alustap Questionnaire

Alustap Questionnaire

Directions for Re-Administering Alustap Questionnaire

Scale Used for Validity Check of Thorne's Scale and "Alienation" Scales

May 27, 1968

TO: GRADE TEN RELIGIOUS EDUCATION TEACHERS

RE: Request for assistance in a research project

May I elicit your co-operation in a research project designed to test the possible correlates of "Alienation"? In his book, Marx's Concept of Man, Erich Fromm (1967) states

. . . the concept of alienation is, in nontheistic language, the equivalent of what in theistic language would be called "sin": man's relinquishment of himself, of God within himself.

I am particularly interested in the relationship between "Alienation" and academic achievement of Grade Ten pupils.

I am requesting of you that you supervise a self-administering questionnaire to your Grade Ten Religious Education pupils during one of your regular Religious Education periods. It is expected that the findings of this study will shed some light on the schools' explicit and implicit objectives in respect to academic achievement and personality development of pupils in their charge.

This project has the sanction of Mr. H. MacNeil, Rev. J. Greone, Mr. L. Donais, and your Religious Education Co-ordinator. I would be most grateful for, and am optimistic concerning, your co-operation.

Thanking you for your consideration.

Yours sincerely,

P. J. Patsula
Counsellor
Student Counselling Service
University of Alberta

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P.S.

If agreeable to you, the questionnaires will be placed in your mail box Wednesday, May 29, 1968. I would appreciate it if the questionnaires could be filled out by students as soon as is convenient. When completed please return all booklets and answer sheets to the Religious Education Co-ordinator.

DIRECTIONS FOR ADMINISTERING ALUSTAP QUESTIONNAIRE

As introductory comments prior to distributing the questionnaire and answer sheets to your students, please read to them the following directions printed in upper-case letters.

YOU ARE REQUESTED TO FILL OUT THE QUESTIONNAIRE WHICH I WILL DISTRIBUTE TO YOU. THE PURPOSE OF THE QUESTIONNAIRE IS TO GAIN A GENERAL IDEA OF THE OPINIONS OF EDMONTON STUDENTS ON QUESTIONS OF CONCERN TO STUDENTS BOTH IN ALBERTA AND IN OTHER PARTS OF THE WORLD.

IT IS HOPED THAT YOUR FRANK AND HONEST ANSWERS WILL ENABLE EDUCATORS TO BETTER UNDERSTAND AND PROVIDE FOR THE NEEDS OF INDIVIDUALS IN EDUCATIONAL INSTITUTIONS.

YOUR INDIVIDUAL ANSWERS WILL BE SEEN ONLY BY THE EDUCATIONAL RESEARCH AND DEVELOPMENT STAFF AT THE UNIVERSITY OF ALBERTA.

YOUR ANONYMITY IS INSURED, AS THE EDMONTON SCHOOLS WILL BE GIVEN ONLY GENERAL SUMMARIES OF GROUP ANSWERS.

FURTHER DIRECTIONS ARE PROVIDED FOR YOU ON THE QUESTIONNAIRES WHICH I WILL NOW PASS TO YOU.

Hand out a questionnaire and answer sheet to each pupil. (If needed, extra copies are available from the Religious Education Co-ordinator's office.)

Please read the instructions on the first page of the questionnaire aloud while the students read them silently.

I WILL READ ALOUD THE INSTRUCTIONS ON THE FIRST PAGE OF THE QUESTIONNAIRE. PLEASE FOLLOW ALONG, READING THE INSTRUCTIONS SILENTLY WHILE I READ THEM ALOUD.

Please emphasize the use of HB or H pencil (fountain pens or ball-point pens are not to be used) for the marking of answers on the answer sheets.

After all the students have placed their booklets and answer sheets in the large brown envelope, please seal the envelope and send it to the Religious Education Co-ordinator's office.

Thank you for your assistance. It is greatly appreciated.

If I may be of any service to you at any time in the future, or if you have any questions, please do not hesitate to call me.

Philip J. Patsula, Student Counselling Services, University of Alberta
Ph. 432-3769
Res. 434-9829

ALUSTAP QUESTIONNAIRE

GENERAL

With the current unrest among students throughout the world, it is of utmost importance that the frank opinions of students be communicated to educators and others. Many educators, parents, and other adults have opinions on the attitudes of high school students. However, such opinions may or may not be true. We are interested in getting closer to the true attitudes of students by having them tell us directly about themselves. You can help us by giving your own frank opinions to the statements in this questionnaire.

DIRECTIONS

Print your name, school, etc. at the top of the answer sheet provided. You may be sure that in spite of this, your answers on this paper will be kept confidential.

As you read each statement, decide how you feel about it, and then mark your answer on the special answer sheet. Use HB pencil.

Indicate your own personal opinion of each statement. Do not indicate what you ought to believe or what other people (teachers, parents, etc.) want you to believe. Try to indicate what you really think about these statements.

Work quickly. Do not puzzle too long over any statement; we want your first reaction, not a long draw-out thought process.

Answer every question. Be sure not to omit any questions.

There are no right or wrong answers. This is not a test of intelligence or ability, but is simply a measure of your usual way of feeling or behaving.

REMEMBER

You need not fear that your opinions will be exposed. No one in this school will ever see your paper. Your teachers will be given only general summaries of group answers. When you finish, insert your answer sheet into the questionnaire booklet and place both in the large brown envelope (which will be sealed after all the class papers have been placed in it).

PLEASE BEGIN

SECTION A

Directions: Statements numbers 1 to 85 are included in this section. Each statement is to be answered either YES or NO. If your choice is YES, place a mark on guideline A on the answer sheet; if your choice is NO, place a mark on guideline B on the answer sheet, as follows:

YES	NO
A	B
.....	

[Randomly ordered items from the 1968 Eysenck's Personality Inventory (57), Thorne's Humanistic Identification Scale (19), and McClosky-Schaar Anomy Scale were included in this section. (See Appendices C, D, and E)]

SECTION B

Directions: Statements numbers 86 to 114 are included in this section. Indicate your own personal opinion of each statement by placing a mark on one of the guidelines on the answer sheet as follows:

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	B	C	D	E
.....				

Thus, if you strongly agree with a statement, place a mark on guideline A on the answer sheet; if you strongly disagree, place a mark on guideline E on the answer sheet. If you don't care either way, place a mark on guideline C. If you agree or disagree less strongly, place a mark on guideline B or D.

[Randomly ordered items from Dean's Alienation Scale (24) and Srole's Anoma Scale were included in this section. (See Appendices A and B)]

SECTION C

And now some census data.

Please fill in the data sheet attached to your answer sheet.

SECTION C

Census Data

115. If you wrote the Alberta Grade Nine Departmental Examinations at which school did you write them?

116. Present High School Program Pattern (circle appropriate response)

(1) Matriculation

(4) Business Education

(2) General

(5) Other (please specify)

(3) Vocational

117. Number of years in school (including the present year)

118. Occupation of Father (or guardian):

(Please be specific. For example: sales clerk at Eatons, door-to-door salesman for Fuller Brush, travelling salesman for Massey-Ferguson.)

119. Occupation of Mother:

THAT'S ALL-----THANK YOU FOR YOUR COOPERATION.

DIRECTIONS FOR RE-ADMINISTERING ALUSTAP QUESTIONNAIRE

As explanatory comments prior to reading to the pupils the original "Directions for Administering Alustap Questionnaire", please read to your pupils the following explanation printed in upper-case letters.

ONE VALID, SCIENTIFIC WAY OF TESTING THE RELIABILITY OF A QUESTIONNAIRE IS SIMPLY TO HAVE INDIVIDUALS FILL OUT THE SAME QUESTIONNAIRE TWICE.

YOU HAVE BEEN RANDOMLY SELECTED TO AID US IN CONDUCTING A TEST OF THE RELIABILITY OF THE QUESTIONNAIRE WHICH YOU FILLED OUT LAST WEEK.

ALTHOUGH THE QUESTIONNAIRE WHICH I WILL PASS OUT TO YOU CONTAINS THE SAME QUESTIONS WHICH YOU ANSWERED LAST WEEK, PLEASE ANSWER EACH ITEM AS YOU NOW FEEL. OVER A PERIOD OF A FEW DAYS, AN INDIVIDUAL'S OPINIONS AND FEELINGS SOMETIMES DO CHANGE--AND SOMETIMES DO NOT CHANGE. THEREFORE, PLEASE DO NOT MAKE ANY SPECIAL EFFORT TO RECALL HOW YOU ANSWERED THE QUESTIONNAIRE ITEMS LAST WEEK. RATHER, SIMPLY ANSWER THE QUESTIONS AND STATEMENTS AS YOU FEEL TODAY. THAT IS, TRY TO ANSWER THE QUESTIONNAIRE AS IF YOU WERE DOING IT FOR THE FIRST TIME.

Please refer to the sheet entitled "Directions for Administering Alustap Questionnaire" and give instructions as you did in the initial administration of the questionnaire.

DEAR GRADE TEN TEACHERS:

It is hoped that your co-operation in the filling out of this brief information blank will provide information useful both for the partial validating of a battery of personality inventories and for the setting up of future school programs.

Please deposit the completed information blank in my mailbox (name of school counsellor was enclosed with parentheses) by Wednesday of this week. Thank you.

Which school subject(s) did you teach, and/or in which extracurricular activities did you have contact with, this year's Grade Ten pupils?

PUPIL "A" is characterized by "courage, an optimistic view, feeling at home in the world, strength to overcome adversities, common sense, being master of one's fate, regard for the welfare of others, being a good loser".

If you had contact with any of this year's Grade Ten pupils who in any way resembled PUPIL "A", please list them below.

PUPIL "B" is characterized by "lack of independence, self-centeredness, feeling ill-treated, expecting everything from others, little activity, hesitation, oversensitivity, impatience, exaggerated emotion, tendency to retreat, signs of weakness, need for support".

If you had contact with any of this year's Grade Ten pupils who in any way resembled PUPIL "B", please list them below.

PUPIL "X" is indifforent toward others, has acquaintances as opposed to friends, does not participate with others, feels lonely and distant from others, feels pessimistic about himself and the future, displays cynical attitudes towards the teachers and the routines of the school.

Please list below any of this year's Grade Ten pupils who in any way resembled PUPIL "X".

PUPIL "Y" is the opposite of Pupil X. PUPIL "Y" participates with others, has a sense of responsibility for others, has not only acquaintances but also has friends, feels "at home" in the school and with his classmates, has a sense of "self-to-others belongingness".

Please list below any of this year's Grade Ten pupils who in any way resembled PUPIL "Y".

NOTE: You may or may not have the same pupil(s) listed more than once.

APPENDIX H

Intercorrelations of items used in the Factor analysis of Doan,
Srole, and McClosky-Schaar scales

APPENDIX I

Summary of the significant values of the F-ratios in the multiple
linear regression analysis

SUMMARY OF THE SIGNIFICANT VALUES OF THE F-RATIOS
IN THE MULTIPLE LINEAR REGRESSION ANALYSIS

CRITERION	LEVELS OF SIGNIFICANCE						
	TEST OF MAIN EFFECTS			TEST OF INTERACTIONS			
	A (Sex)	B (Ach)	C (SES)	AB	AC	BC	ABC
Factor I	.000	.314	.036	.164	.154	.645	.168
II	.123	.057	.678	.088	.321	.554	.370
III	.000	.230	.909	.850	.060	.031	.209
IV	.303	.141	.484	.478	.417	.021	.020
Dean's Normless.	.275	.885	.072	.448	.163	.622	.337
Powerless.	.243	.197	.813	.041	.581	.605	.328
Soc. Iso.	.081	.170	.524	.526	.343	.002	.743
Total	.640	.526	.376	.083	.214	.092	.551
Srole	.022	.173	.259	.110	.373	.428	.477
McClosky-Schaar	.148	.877	.589	.839	.359	.335	.802
Thorne	.000	.569	.190	<.01	.609	.773	.901
Extraversion	.112	.000	.117	.403	.078	.113	.415

APPENDIX J

Intercorrelations found among the "alienation" measures

The concepts of alienation and anomie are theoretically distinct--alienation dealing with the psychological subjective realm and anomie dealing with the sociological objective realm. However, in the actual measurement of the concepts there appears to be some fusion when sociologists attempt to ascertain the societal condition of anomie by tapping the individual's awareness of the condition. It is suggested that there may well be some overlap of the concepts at this point of measurement. This is not to argue that the concepts are identical but, rather, merely to indicate that sociological scales of anomie seem to get at objective societal conditions by inference from subjective responses of individuals and thus these responses may also prove fruitful in getting at the actual subjective psychological aspects of alienation.

It is with the above in mind that Srole's Anomia Scale and McClosky-Schaar's Anomy Scale have been combined in the pool of items to be factor analyzed to obtain measures of "alienation" and it is with the above in mind that significant correlations were expected among the various scales of "alienation".

Table J1 shows the intercorrelations among the "alienation" measures. These correlations appear consistent with those reported by Dean (1961), Sirmons (1966), and Lefcourt and Ladwig (1966) (See Appendix A). The factor scores are uncorrelated by definition (cf. supra, p. 39). The reader will note that Thorne's scale, measuring a concept postulated to be the opposite of "alienation", bears a generally consistent negative relation to the other measures. Had

this scale been scored oppositely (along the alienation dimension rather than the lack of alienation dimension) the algebraic signs of the correlation coefficients would have been reversed.

It is interesting to note that Dean's Alienation measures correlate significantly with the anomia and anomy measures of Srole and McClosky-Schaar, respectively. Of course, this does not indicate that the three scales are measuring the same thing, but it also does not disconfirm the view that the scales operationally may be measuring aspects of a general alienation syndrome.

TABLE J1

INTERCORRELATIONS AMONG "ALLENATION" MEASURES--COMBINED BOYS AND GIRLS

N = 371

	D-N	D-P	D-SI	D-T	Sro	M-S	Thor	I	II	III	IV
D-N	--	546	292	774	532	412	-135	612	309	413	-100
D-P		--	418	871	542	462	-176	568	337	459	148
D-SI			--	687	354	385	-311	130	252	354	622
D-T				--	614	537	-262	598	386	509	248
Srole					--	418	-185	647	397	171	247
M-S						--	-028	191	618	446	270
Thorne							--	-283	039	041	-255
I								--	-001	-001	004
II									--	-000	-001
III										--	004
IV											--

 $r \geq .230$ required for significance at the .01 level (one-tailed) $r \geq .164$ required for significance at the .05 level (one-tailed)

NOTE: Decimal points have been omitted.

TABLE J2
INTERCORRELATIONS OF "ALIENATION" MEASURES--BOYS
N = 192

	D-N	D-P	D-SI	D-T	Sro	M-S	Thor	I	II	III	IV
D-N	---	593	271	780	509	436	-133	664	297	505	-109
D-P		---	415	884	528	461	-144	642	298	521	137
D-SI			---	678	370	370	-364	126	233	370	666
D-T				---	599	526	-245	622	346	607	248
Srole					---	504	-216	618	446	275	260
M-S						---	-044	315	619	423	309
Thorne							---	-237	008	-001	-262
I								---	056	202	-048
II									---	-033	015
III										---	040
IV											---

$r \geq .230$ required for significance at the .01 level (one-tailed)
 $r \geq .164$ required for significance at the .05 level (one-tailed)

NOTE: Decimal points have been omitted.

TABLE J3

INTERCORRELATIONS OF "ALIENATION" MEASURES--GIRLS

N = 179

	D-N	D-P	D-SI	D-T	Sro	M-S	Thor	I	II	III	IV
D-N	---	489	326	754	554	399	-118	592	332	392	-098
D-P		---	436	853	554	479	-195	509	395	476	154
D-SI			---	724	361	395	-303	202	263	330	589
D-T				---	627	546	-250	555	430	534	231
Srole					---	352	-100	684	374	152	218
M-S						---	-049	136	614	464	242
Thorne							---	-217	039	-046	-226
I								---	-005	-003	013
II									---	-014	-008
III										---	008
IV											---

$r \geq .230$ required for significance at the .01 level (one-tailed)

$r \geq .164$ required for significance at the .05 level (one-tailed)

NOTE: Decimal points have been omitted.

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